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# STRUCTURES AND SUPPORTS FOR DATA USE IN SCHOOLS:

# A QUALITATIVE CASE STUDY OF ONE URBAN ELEMENTARY SCHOOL

by

Anne M. Groh

A Dissertation Submitted in

Partial Fulfillment of the

Requirements of the Degree of

Doctor of Philosophy

in Urban Education

at

The University of Wisconsin-Milwaukee

May 2013

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ABSTRACT

STRUCTURES AND SUPPORTS FOR DATA USE IN SCHOOLS:

A QUALITATIVE CASE STUDY OF ONE URBAN ELEMENTARY SCHOOL

By

Anne M. Groh

The University of Wisconsin-Milwaukee, 2013

Under the Supervision of Professor Gail Schneider, Ph.D.

A federal policy in the United States has required sweeping changes in K-12 education. With No Child Left Behind legislation, schools are challenged to create conditions that bring each student to federally-set academic proficiency levels. Many schools have become more attentive to data about student performance and how it can inform their teaching decisions to meet federal goals under No Child Left Behind. How one urban elementary school in the Midwestern United States used data for decision-making in 2010-2011 was the focus of this research. The purpose of this study was to gain understanding about how personnel in one academically successful urban elementary school use data to guide instructional decisions. Findings show that beyond structures and supports provided by the district for data informed decision-making at the school level, teacher efficacy and guided inquiry into data use were powerful factors contributing to student learning and academic success.

This research was a qualitative case study guided by naturalistic inquiry. Qualitative, interview data were coded through content analysis and meaning was made from participant interviews and document analysis.



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In this study, data were defined as results stemming from formative and summative assessments within the learning context. These questions were answered: What are the structures and strategies used for data-driven decision-making, and what are the roles of the school principal, the teachers and other stakeholders in the decision-making framework?

Key findings emerged. First, there are differences in data-driven decision making models at the federal policymaking level and school level. Still, both federal policy and district policy provided limited value to practitioners at the local level. This underscores the need for localized innovative practices and for local representation in larger policy decisions. Another finding is the role of instructional leadership in facilitating data-driven decision making in the classroom. Instructional leadership that is grounded in relationships of trust and caring impacts teacher growth. Transformational change is most responsive to strategies that engage teachers as co-authors of reform including professional learning communities, teacher efficacy, and community building around improvement efforts. In this way, institutionalized supports and genuine care work hand in hand to transform teaching and learning.



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# Dedication

To my father,

James D. Groh

Who made it his vocation to provide the best education for his daughter.

Thank you for believing in me.



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# Chapter 1: Introduction

This research was a qualitative case study of professional structures and supports related to decision-making among educators in an urban elementary school. The study was undertaken during the 2010-11school year in the context of public schools nationwide adapting to No Child Left Behind (NCLB), the federal legislation that sets achievement standards for students and puts unprecedented accountability measures in place for educators. NCLB mandates have inspired various studies of school structures, programs and processes that promote instructional change. Still, researchers know little about how educators engage with these structures, programs and protocols in their daily work (Spillane, Halverson & Diamond, 2001).

## Statement of the Problem

Research supports the idea that using data strategically has a positive impact on student learning (Bernhardt, 2005; Earl & Katz, 2006). And, building local capacity has been recognized as pivotal to the implementation of educational reform (Berman & McLaughlin, 1977; Elmore & McLaughlin, 1988). Researchers have discovered that the leadership role of the principal is instrumental in driving the effective use of data among teachers and staff (Boudett, City, & Murnane, 2007; Earl & Katz, 2006; Elmore, 2006; McLaughlin & Talbert, 2006; Supovitz & Klein, 2003; Wayman & Stringfield, 2006). Additionally, the degree to which teachers incorporate standards and accountability into their practice of teaching and learning is ultimately what affects student learning (Black & Wiliam, 1998). Therefore, an understanding of how school personnel use data to drive instructional decisions over the course of a school year would provide perspective about how federal policy related to standards and assessment is actually implemented at the local level to foster student learning.

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## Research Questions

This study examined the structures and strategies used to support the application of test data to teaching practices within Central Unified School District at Friendship Elementary School. The school selected for study stood out for having improved test scores even as its percentage of low-SES and minority students increased. The researcher, therefore, believed that even as challenges to effective data use might be evident at the school, exemplary instances of decision-making supports and structures might be identified. This study sought to understand the use of data within four areas by asking these primary research questions:

1. What are the structures and strategies used for data-driven decision making?
2. What is the school principal's role in the use of data for decision making?
3. What are the teachers' roles in the use of data?
4. How do other stakeholders such as consultants engage with data?

Answers to these questions were sought primarily through interviews with teachers, the elementary school principal, district-level leaders and an external consultant throughout the 2010/11 school year. Data were triangulated with the researcher's observations from interviews and analyses of school documents.

## Significance of the Study

This study builds upon the knowledge of the work of school personnel as data users. It can inform educators and policymakers about how various stakeholders in schools use data to impact student learning (Kerr, Marsh, Ikemoto, Darilek, & Barney, 2006). Identifying the structures and strategies that support the use of data is an essential component of school reform efforts, especially as leaders work toward building a culture of inquiry in which data use is

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embedded in day-to-day practices (Anderson, Leithwood, & Strauss, 2010). The findings of this study are intended to inform research on school leadership (Wayman, Midgley, & Stringfield, 2006). It also suggests areas for further research related to data use in schools.

## Background of This Study

A history of data use and decision-making structures in United States education dates back to when compulsory education became widespread. Two conflicting camps emerged concerning the purpose of education and, by extension, the proper use of data and the ideal form of educational management. Both schools of thought – the social efficiency proponents (Zeichner & Liston, 1990) and the Progressives (Cremin, 1961) have legacies in education today.

During the early 1900s, waves of immigrants came to the United States seeking various freedoms and financial prosperity. Initially it was common for immigrant children to join the labor force and work alongside their mothers and fathers in poorly regulated factories and coal mines. In an effort to improve the literacy rate among immigrant children and to aid cultural assimilation efforts, states began to pass compulsory school attendance laws. Massachusetts was the first state to pass a law in 1852, followed by New York in 1853. By 1918, all states required children to attend school. Progressive Era politics led to federal restrictions on child labor in 1937. Schooling became the solution for what to do with children while their parents were at work (Goodman, 2012).

Public schools emerged at a rapid pace to accommodate the quickly growing urban populations. Soon the issue of a school's best function became a heated topic for debate among politicians, educators and business people. Those from the "social efficiency" camp argued that schools ought to primarily prepare children for the workforce. Meanwhile, those pushing for

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"progressive education" emphasized the importance of educating students for their eventual roles as adult citizens in a nominally democratic society. These two camps advocated for radically different styles of education in terms of how data should be used and how educational management should be exercised.

**Social Efficiency Proponents**

The social efficiency movement of the early 1900s involved the belief that science could be applied to improve worker efficiency. It took over in education when proponents argued that modern principles of scientific management, originally put forth to maximize the efficiency of factories, could be applied with equal success to schools (Zeichner & Liston,1990). The movement was led by the engineer Frederick Winslow Taylor, a man known for using his stopwatch on the factory floor. Social efficiency policies (Cremin,1961) were also encouraged by influential educators such as John Bobbitt (Bobbitt,1912) and David Snedden (Tyack,1979) and by sociologists and psychologists. Their ideas were well-received by politicians, US Army officials, and influential business leaders and philanthropists such as Andrew Carnegie.

Emphasizing work preparedness, these stakeholders promoted a basic curriculum that included teaching students to speak English, become literate and perform basic computations. The expectation was that children would become prepared for their adult roles through rote memorization (Shepard, 2000). Critical thinking skills and creativity were not prized. The importance of following directions was a crucial part of the hidden curriculum; after all, employers wanted a compliant workforce.

The factory-friendly idea of a workforce being accustomed to taking orders also applied among school staff. Business leaders and community leaders had been criticizing educators for being inefficient and teaching antiquated curricula despite massive financial investments in

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public schooling (Campbell et al., 1987). Taylor's ideas about how to manage operations became the underpinnings of school administration. Central to "the Taylor system" was the transfer of power from workers to a central authority for the sake of efficiency. Taylor's industrial-age management model breaks the system down into pieces; in school districts, one person is a superintendent, another is a principal, yet another is a teacher. Each person does the tasks assigned to his or her specialized job, which eliminates the need to build partnerships across job functions and increases efficiency (Senge, 1990).

Similarly, schools are organized into classroom grades, with a certain amount of time allocated to each content area for a given number of days during the school year. There is little room for maneuvering around the established schedule and calendar year. It reflects the factory model prevalent during the turn of the century.

Elements of Taylorism are still evident in public schools today, but organizations evolve. For example, the present case study shows how power can be shared in different ways even as school employees hold distinct roles. Such power-sharing would likely be advocated by John Dewey, the social scientist and educator who was frequently at odds with members of the social efficiency movement.

## John Dewey and Progressive Education

John Dewey was careful to point out the drawbacks of factory-friendly efficiency being applied to education. He argued that public schools would better serve society by teaching children to participate thoughtfully, responsibly and actively in a democracy. While at the University of Chicago from 1896-1903, Dewey directed the Laboratory School of the University of Chicago. This demonstration school was a collaborative venture between parents, teachers and educators to promote learning through natural exploration, student interests and

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developmental needs rather than a top-down or teacher-directed approach (Mayhew & Edwards, 1936; Darling-Hammond, 1997).

Ralph Tyler's *Eight-Year Study* in the 1930s documented how students from progressive schools like Dewey's were more academically successful, resourceful and socially responsible than 1,475 matched peers from traditional schools (Smith & Tyler, 1942). Moreover, research during the 1960s showed that Progressive Era curricula and inquiry-oriented teaching produced learning gains in students' abilities in areas of critical thinking, problem solving, written and oral language, and creative expression (Darling-Hammond, 1997). Nonetheless, despite this empirical evidence, Dewey's ideas are often eclipsed by those of purely back-to-basics advocates as debate about the role of schools continues today.

Today's emphasis upon standardized testing in schools can be traced back to this early struggle between social efficiency and progressive politics. While Dewey encouraged experiential education, social efficiency proponents focused on devising scientific measures of ability in order to determine which students were best suited for each vocation. As their ideas took hold, students' educational paths and adult work roles were increasingly determined early on through standardized testing. This led to inequities in education and ultimately the passage of No Child Left Behind.

## The Emergence of Testing

The Intelligence Quotient (IQ) came to the U.S. from France. American psychologists described the IQ test as being an exact measure of a fixed, inherited trait. Goddard, a prominent psychologist at the time, regarded intelligence as a "unitary mental process…which was inborn" (Goddard, 1920). Terman, another prominent psychologist, worked with Goddard to rank

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schoolchildren according to their IQ scores, asserting that there was a relationship between a person's IQ score and one's natural lot in life: "An IQ below 70 rarely permits anything better than unskilled labor… the range of 70-80 is preeminently that of semiskilled labor; from 80-100 that of ordinary clerical labor" and so on (Campbell, Fleming, Newell &Bennion, 1987). Curriculum offerings were then tailored to each group of students so that differentiated instruction would prepare them for their predetermined level of employment.

Social efficiency meant that students wouldn't spend time on material that would not be of direct service to their employers. For John Bobbitt, a leader in the social efficiency movement, a primary goal of curriculum design was the elimination of wastefulness (1912) and he maintained it was wasteful to teach people things they would never use. Bobbitt's most telling principle was that each individual should be educated "according to his capabilities."

During this time, the US Army contacted Robert Yerkes of the American Psychological Association to develop a group administered test, similar to the individual intelligence test developed in France, so that the Army could identify recruits most likely to succeed in officer training programs for World War I. The resulting aptitude test was known as the Army Alpha. It provided Army officials with information about how a recruit scored on test items such as following directions and mathematical reasoning in comparison to his peers. Those who did well were sent to officer training school, and those who scored lower were sent to fight in the war or were denied entry into the Army (Popham, 2001). It was a highly successful measurement tool for its intended purpose. Following the war, the U.S. Copyright Office received multiple requests to copyright new educational tests. These tests were different only in that they were achievement tests rather than aptitude tests (Popham, 2001).

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As a result, achievement testing soon merged with IQ testing as a way to measure student aptitude and levels of learning. According to Ralph Tyler (1942), "The achievement-testing movement provided a new tool by which educational problems could be studied systematically in terms of more objective evidence regarding the effects produced in pupils" (p. 349).

Unfortunately for students, test data were not applied for "problems" or remedial education. The Army method was applied to students instead. Test results were applied to track them into career clusters, not to help all students attain a standard level of proficiency.

Educators and policy makers have long acknowledged a value for precise forms of measurement, the importance of routinely collecting and analyzing information and the use of scientific procedures (Campbell et al., 1987). Today, more data are available than ever before. A crucial difference from a century ago involves how the data are to be used under NCLB. Modern educators' overall goal is to use data to help *all* students meet certain standards. While the collection of data in schools is not new, the way in which the data are to be applied is unprecedented. However, important steps toward the contemporary goal were taken in the 1960s.

## Federal Reforms in Education

By the 1960s, national attention became focused on shortcomings of the factory model for education and the ways in which test data were being applied. Activists protested large disparities in educational opportunities and student performance (Campbell et al., 1987). President Kennedy began working on a bill to provide equal access to education for all children. After his assassination, President Johnson continued Kennedy's work through the War on Poverty. In 1965, he signed The Elementary and Secondary Education Act (ESEA), America's most expansive and enduring federal education bill. It provided federal funds to local school

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districts on the basis of how many low-income students they served. The ESEA has been reauthorized several times since 1965, most recently in 2002.

President Johnson's reform effort coincided with increasing concern about the high achievement levels of students in other countries. In particular, the Soviet Union's successful launching of the Sputnik spacecraft in 1957 raised concerns that the Soviet school system was producing superior scientists. Those fears seem to have never been allayed. In 1983 the National Commission on Excellence in Education published *A Nation at Risk*; a bleak report suggesting that national security was at risk because of substandard public education. The report states:

> Our nation is at risk. Our once unchallenged preeminence in commerce, industry, science and technological innovation is being overtaken by competitors throughout the world…the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people. (p. 1)

Resulting efforts for educational improvement included legislation in 41 states that mandated coursework in core curricular areas, increased requirements for teacher certification, and attempted to standardize curricula. Despite these efforts, five years later the Department of Education released a new report, *The Reading Report Card, 1971-88: Trends from the National Report*, which stated that these reform efforts had been ineffectual (Mullis & Jenkins, 1990).

The most recent wave of school reform has three foci: The development and use of ambitious content area standards as the basis of standards and accountability; the dual emphasis upon setting demanding performance standards for all students; and the use of high-stakes

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accountability measures for schools, teachers and students (Linn, 1998). These can be seen in Goals 2000 and No Child Left Behind.

**Goals 2000**

Performance standards are a salient feature of the new reform initiative, No Child Left Behind. To meet these standards, the federal government has encouraged states to develop demanding content in a standardized curriculum. This push for standardized curriculum is backed by two pieces of legislation from 1994: The Title I requirements in the Improving America's Schools Act of 1994, and the Clinton Administration's Goals 2000: Educate America Act. As described below, Goals 2000 led to today's No Child Left Behind Act.

In 1990 the US Department of Education had reported that "stagnation at relatively low levels appears to describe the level of performance of American students" (Alsalam & Ogle, 1990). Goals 2000 embodies the belief that American schools are generally undemanding and accept mediocrity, and that much more intellectually challenging instruction is needed to make students more academically and economically competitive. The plan is ambitious: It aims to create a new guiding framework for public education that would focus on demanding high academic standards and tightening the links between these standards, curricula, instruction and assessment (McGill-Franzen, 2000).

In 1994, the Goals 2000 Educate America Act established a process for creating standards, measuring student performance and providing support for students to reach these standards. According to the North Central Regional Laboratory (2009), this act

> Codified in law the six original education goals concerning school: [R]eadiness, school completion, student academic achievement, leadership in math and science, adult literacy,

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and safe and drug-free schools. It added two new goals which encouraged teacher professional development and parental participation. (Paris, 1994)

Goals 2000 was accompanied by the mandated use of test results as high-stakes accountability measures for schools, teachers and students. Standardized testing continued gaining momentum despite strong criticism that standardized tests were yielding inflated results in student achievement levels (Linn, 1998) and that testing narrowed the curriculum to an emphasis on basic skills (Resnick & Resnick, 1992).

**No Child Left Behind Act (NCLB)**

Following Goals 2000, the No Child Left Behind Act placed an increased emphasis upon standardized test scores to demonstrate student achievement. Signed into law on January 8, 2002 by President George W. Bush, the No Child Left Behind Act (NCLB) is a federal policy predicated upon the theory that with the right combination of highly qualified teachers, scientifically based programs and the use of certain data for accountability purposes, each student in the country will become proficient in core academic areas.

NCLB provides the federal challenge that all students be proficient on state assessments by the year 2013. Each year, standardized tests measure students' skills and knowledge in reading, math, science and social studies. Data from these assessments are intended to provide teachers, parents, and the wider school community information they need to evaluate the students' academic success.

As a condition of receiving federal funds, NCLB requires that districts document success in terms of what each child needs to know and accomplish in school. The Act contains four basic principles: Stronger accountability for documented improvement in achievement for all

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students; increased district flexibility and local control; expanded school choice options for parents; and an emphasis on using teaching methods that have been proven to increase achievement levels (US Government, 2003). In addition, states must establish academic standards to guide their curricula and must adopt a testing program that is aligned with those standards (McGuinn, 2005 and McGuinn, 2006). Furthermore, all states must have "adequate yearly progress" (AYP) benchmarks for student achievement. Results for each school are made public and consequences are mandated for schools that do not improve (Abernathy, 2007). If a school fails to meet AYP for two or more years consecutively, the consequences become more severe. A table listing the consequences for schools that fail to make AYP is listed in Appendix A.

**Adequate Yearly Progress (AYP).** AYP is the heart of testing under NCLB. AYP is based on the results of students' scores on the standardized test administered annually. Achieving AYP means one of two things: Either a sufficiently high percentage of the students in the school or district meet state academic proficiency levels in identified content areas, or the school or district is meeting state requirements to demonstrate sufficient growth toward proficiency targets.

Schools and districts are judged by the performance of all of their students and by the performance of students in subgroups. There are eight subgroups of students: White, Black, Hispanic, American Indian, Asian or Pacific Islander, students with limited English proficiency (LEP), students eligible for free or reduced-price lunch (SES) and students who meet criteria for special education services (SwD). A student may be represented by more than one category. Typically, states determine the minimum number of students enrolled in a subgroup for inclusion in AYP calculations, and the number ranges from ten to fifty (Abernathy, 2007). Essentially, the

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more diversity there is within a school or district, the greater the chances of the school or district not making AYP.

**Impact of poverty on student success in schools.** A major link between "diversity" and failure to meet AYP seems to be poverty. Child poverty rates are highest among Black (63%), Latino (63%) and American Indian children (63%) compared to Whites (31%) (National Center for Children in Poverty, 2012). Research documents connections between poverty and challenges to academic achievement. For instance, the American Psychological Association shows that the psychological stress associated with conditions of poverty for children affects concentration and memory (American Psychological Association, 2012). Odden and Archibald found that a school's poverty index has a significant negative effect on student reading and math achievement (2005). The poverty index includes student transience rate, percent of students receiving free lunch and the percent of minority students.

Nationally, culturally diverse children lag behind their peers on standard academic achievement measures. Gloria Ladson-Billings speaks to the African American experience in education in *The Dreamkeepers* (1994). She notes that despite integration efforts arising from the Brown v. Board of Education decision, African American students lag significantly behind their White counterparts on all standard achievement measures.

Data about achievement levels of minority students are represented in the National Assessment of Educational Progress (NAEP) test. This test has been given to nationally representative samples of students at age 9, 13, and 17 since 1969 in order to measure the nation's educational progress. These data show achievement gaps between White and Black students as well as White and Hispanic students persisting in 2004 and 2008 in Reading and Math in all three age groups (National Center for Education Statistics website, 2012).

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**NCLB leads to school accountability.** NCLB sparked disagreements and controversy among researchers, policymakers and educators. Despite the controversy, all groups agreed on some hopeful outcomes for NCLB. According to Abernathy (2007), two things are clear. First, NCLB presents goals that are necessary. He says, "Ensuring that our public schools demonstrate improved performance for all students and for those students who have traditionally underperformed is absolutely essential on the grounds of fairness, national economic interest, and fulfillment of the American dream" (p. 10). Second, he asserts the effects of the law will be far-reaching. Schools who fail to demonstrate AYP face serious sanctions which, if a school over the course of consecutive years does not meet AYP, will eventually include restructuring; perhaps with outside management.

## Data Informed Decision-making

While schools have always used some form of data in decision making, there is now a concerted effort to use data more effectively in meeting both internal and external goals. Because of accountability measures identified in NCLB, school leaders must now be able to formulate accurate predictions about student performance on high-stakes testing and set adequate yearly progress goals. Effective data use today involves understanding the practices and cultures of a school and reshaping them as needed in response to data within the context of high stakes accountability (Halverson, Grigg, Pritchett, Thomas, 2005). The dilemma facing schools is identifying which data to use and what changes to make (Bernhardt, 2005; Halverson et al., 2005).

Research conducted since NCLB's implementation has shown that although schools use data, their data use doesn't routinely influence classroom practice and isn't necessarily embedded in teacher and administrator decisions (Earl & Katz, 2006; Halverson et al., 2005;

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Wellman & Lipton, 2004). For example, Knapp, Copland and Swinnerton (2007) discovered that data used for making decisions were often "unsystematically gathered, incomplete, or insufficiently nuanced to carry the weight of important decisions" (p. 74).

The accountability factor is increasingly moving districts toward implementing changes in their schools (Bodilly, 2001). In particular, the national attention placed on public school performance has triggered a growing interest in data-driven decision making and school leadership practices to meet the new demands for student achievement (Halverson et al., 2005; Earl & Katz, 2006; Knapp, Swinnerton, Copland & Monpas-Huber, 2006). For example, a 2005 national survey of state and district education officials found that 99% of the officials reported they were "aligning curriculum and instruction with standards and assessment" (Center on Education Policy, 2011). School administrators are being asked to work in different ways as education policymakers have shifted their focus from more general management to accountability for student academic performance (Leithwood & Reihl, 2003). Educators are expected to use data to understand student's strengths and weaknesses and adjust instruction accordingly.

NCLB mandates have inspired several studies of the school structures, programs and processes that promote instructional change. However, researchers know little about how these changes are embraced by educators in their daily work (Spillane et al, 2001). There is an underlying assumption that school leaders are able to create an organizational framework in which data are used consistently and effectively by teachers and other staff members (Knap et al., 2006; Elmore, 2006).

As the 2012-2013 academic year comes to a close, certain factors are reminiscent of Dewey's time one century ago. Although IQ tests are no longer administered to children as a

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means of determining capabilities and a student's lot in life, achievement testing presents similar results. The use of achievement tests to categorize students' learning capacity or readiness for learning yields the same negative outcomes as tracking students based on IQ: There is still the tendency to use test results to assign students to instructional groups rather than use the test to tell something particular about what a student knows or how he or she is thinking about a problem (Shepard, 2000).

As recently as 1994, Herrnstein and Murray echoed the social efficiency proponents' sentiment about IQ and social development. In their controversial book *The Bell Curve: Intelligence and Class Structure in American Life* (1994), the authors present their case that intelligence is a fixed, stable, inherited trait that can be measured through IQ testing (Shannon, 1998). They conclude, "Inequality of endowments, including intelligence, is a reality. Trying to eradicate inequality with artificially manufactured outcomes has led to disaster" (p. 551). Therefore, even as No Child Left Behind emphasizes the value of educating all children to certain proficiency levels, the belief persists among some educators that one's lot in life is fixed at birth and that attempts by schools to improve what a child knows and is able to do are futile.

We are in the midst of the largest wave of immigration in our nation's history and the US population is growing exponentially faster than it was during the Industrial Era. Simultaneously, the pace of economic, technological and social change is dizzying. Peter Drucker (1994) calls the rise and fall of the blue collar class between 1950 and the year 2000 the most rapid of any class in the history of the world. In this context the demand for responsive education can be heard from stakeholders in business, government and education. How schools can go about enacting mandated changes remains more elusive.

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## Key Terms

This section about key terms is divided into three categories of relevant terms used throughout this dissertation: Assessment, instruction and leadership.

### Assessment

**Assessments.** Assessments are classroom activities that provide information that can be used as feedback to inform teaching and learning activities (Black & William, 1998). A *summative assessment* summarizes student learning at a point in time. A common example of a summative assessment is a state standardized test. The assessment becomes *formative* when the data are used to inform decisions about how to best meet student needs. Examples include teacher observation, classroom discussion and analysis of student work including homework and tests.

Research suggests that using formative assessments effectively produces significant learning gains particularly with low achieving students (Black & William, 1998). The process of helping a student become aware of gaps between what they currently know and are able to do versus what they need to know and do helps guide their efforts.

**Data.** Wayman (2007) defines data as "any information that helps educators, schools, and the district do their jobs" (p. 19). Examples of these data are achievement tests, formative assessments, dropout rates, free or reduced-price lunch participation, and disciplinary information.

**Data use.** Data use, according to Heritage and Yeagley (2005), is a tool for schools to locate "accurate and actionable information about what students know and can do so that they

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can plan effectively for student learning" (p. 120). Data use by the principal as instructional leader involves a response to the data with classroom outcomes in mind. Wayman (2005) asserts that "Perhaps most important, student data provide a different set of information to augment professional judgment" (p. 236).

Defining effective data use is a process of organizing the data around instructional improvement (Boudett et al., 2007). How the data are interpreted and implemented will determine its effectiveness, but alone, data has no inherent meaning. Wellman and Lipton (2004) maintain that effective data use occurs when data lead to inquiry, conversation, problem solving and action around student learning. In turn, effective data use informs classroom instruction and student learning.

**Measures of Academic Progress (MAP).** MAP is a commercially available growth model assessment being purchased by increasing numbers of states to provide formative data about student growth. It is a computer adaptive test that measures student growth in four subject areas – reading, language arts, math and science – three times yearly. District leaders perceived MAP as the "gold standard" of tests because it has the following capabilities: (1) Measuring skills and assessing knowledge in grades K-11, (2) tracking student learning growth, (3) generating immediate results, and (4) enabling reflection on teaching practice.

MAP is also used as a teaching tool by educators. Test results are available shortly after testing. The test reports present progress in Rasch Unit (RIT) scores. RIT is an equal interval measure that enables comparisons across test scores by grade, term, test area and student. This helps teachers make judgments about areas of relative strength and weakness for a class, a group or an individual student. MAP reports also provide teachers with a list of skills tied to each RIT

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score. Skills lists indicate what a student needs to know and be able to do for advancement to the next level.

**Knowledge and Concepts Examination (KCE).** The KCE is an annual standardized test given to every student in the autumn. Implemented in 2003 as part of the No Child Left Behind Act (NCLB), it measures student knowledge of state Model Academic Standards. It was developed by the Department of Public Instruction, educators, and CTB/McGraw-Hill, the company that publishes the KCE. Students in grades 3, 5, 6, and 7 take tests in reading and mathematics. Students in grades 4, 8, and 10 take tests in reading, mathematics, science, language arts, writing and social studies.

Results from the test are returned to schools and are typically available to the public by March or April. Criticism is aimed at the delay in providing test results to teachers. Students receive simple scores of minimal, basic, proficient or advanced performance on a test. There are no indications about which particular content areas were difficult for a student.

**Writing assessments.** District writing assessments are administered to students in grades 2, 3, 4, and 7 in either the fall or spring in order to determine their skills in areas such as focus/purpose, organization, content, fluency, word choice and use of conventions. The rubrics developed and used within the district are aligned with the state's scoring rubrics.

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## Instruction

**Understanding by Design (UbD).** Grant Wiggins and Jay McTighe developed Understanding by Design (UbD) to help make the task of teaching to content standards more manageable. In order to help each student advance to grade-level proficiency, teachers nationwide have been instructed to meet content standards, i.e., to focus on teaching content that is assessed on standardized state and national tests. However, the sheer volume of content included in these standards is staggering.

Wiggins and McTighe outline a process in which teachers work backward from the "big idea" to the classroom lesson. This strategy is commonly known as backward design because it asks teachers to begin planning with the end in mind. Teachers start by identifying the results they want for students. For example, what do students need to know, understand and be able to do as a result of the unit or lesson? Next, teachers determine acceptable evidence that students have learned the key concepts. During this stage, teachers identify what should be assessed and how it will be assessed. Finally, teachers plan their lessons to reflect the big understanding and the knowledge that will be assessed.

**Differentiated Instruction (DI).** Differentiated instruction is built upon the idea of multiple intelligences (Gardner, 1985) and Bloom's Taxonomy of Educational Objectives (1956). The notion of multiple intelligences suggests that learners exhibit different learning styles or preferences. For example, some students learn best with visual aids and others are kinesthetic learners. In the classroom this translates to varied entry points for teachers to teach content knowledge. A skill might be taught using a "hands on" approach, a visual approach, or a logical approach. Knowing a student's preferred learning style enables teachers to design lessons that

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provide better access to curriculum topics. Bloom's taxonomy, meanwhile, presents a hierarchy of skills from grasping entry-level knowledge to analyzing and synthesizing information. The assumption is that knowledge and understanding become more sophisticated and complex as one proceeds along the hierarchy.

Heacox (2002) incorporates ideas about multiple intelligences and Bloom's Taxonomy so that instruction reflects the student's learning pace, level of instruction and preferred learning styles. The goal is to provide a learning environment that maximizes the potential for student success by offering students multiple methods of acquiring information and making sense of ideas.

## Leadership

**Learning organizations.** Senge (1990) explains that learning organizations are places "where people continually expand their capacity to create the results they truly desire, where new and collective patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (p. 3). In schools the term "learning community" is used in the same way. School learning communities consist of people from multiple constituencies at all levels working collaboratively and continually (Louis & Kruse, 1995). A central trait of a learning community is a focus on student learning so that the learning environment supports each student's achievement potential (Luis & Kruse, 1995).

**Instructional leader.** This study is informed by the emerging research about the role of principal as instructional leader. According to Leithwood, Seashore Louis, Anderson, & Wahlstrom (2004) the term "instructional leadership" has appeared in research literature for decades. Cross & Rice (2000) describe instructional leadership as placing student learning as a

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priority for the entire school and motivating both teachers and students to higher levels of teaching and learning. The present study defines instructional leadership as the practice of learner-centered leadership (Spillane, Hallett & Diamond, 2003). Learner-centered leadership involves the practices that occur when one is an instructional leader.

**Distributed leadership.** Distributed leadership refers to a way of thinking about the practice of school leadership (Gronn, 2002; Spillane, Halverson and Diamond, 2001, 2004). Whereas traditional definitions of school leadership focus on the aptitudes and skills of an individual leader such as the school principal, distributed leadership defines leadership according to the interactions between leaders and followers and their situation (Spillane, 2005). Leadership is shared across many leaders including those with and without formal leadership roles. Through interdependent interactions with one another, leaders construct their leadership practice.

## Conclusion

This introduction has provided a broad overview of the subject of this dissertation including a statement of the problem, an overview of the study and a discussion of the study's significance. The next chapter, a review of the relevant literature, provides a conceptual framework that guides this study. The third chapter, Methods, presents the research design and an explanation of how the data for the study were collected and analyzed. The final chapters, 4 and 5, present the findings and a discussion of their relevance for advancing our understanding of the use of data for decision making during an era of accountability and reform in education.

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## Chapter 2: Review of the Relevant Literature

The literature review for this case study begins with an overview of historic federal intervention into education and the use of measurement and evaluation in schools. It continues with a review of data use in schools today and then an in-depth look at data use in schools where data driven decision making has become a priority. Data use is explored in the light of instructional leadership, particularly data-informed leadership and distributed leadership as they relate to accountability in schools. A visual display (figure 2.1) of the main points of the literature review is included to provide an overview of this chapter.

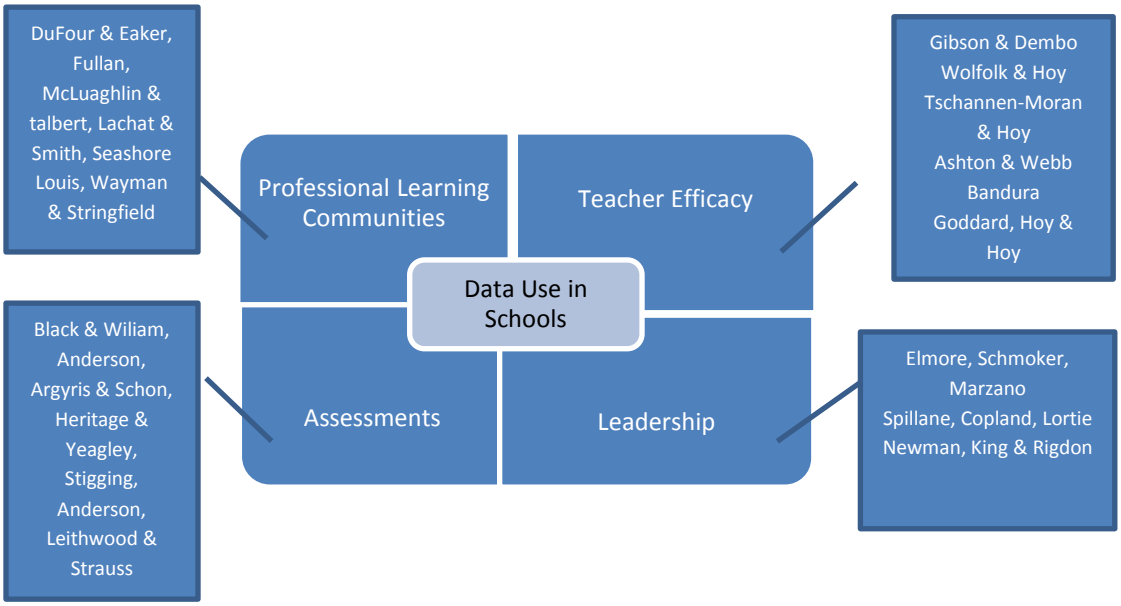


*Figure 2.1: Review of the Literature*

### Unprecedented Federal Intervention in Education

Local school districts have had remarkable autonomy during much of U.S. history. Public schooling is generally a domain of the state, not the federal government. States, in turn, have historically been reluctant to impose extensive control over schools and school districts. State legislatures, educational agencies and courts have left many decisions about school

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operation to the local school districts. However, in recent decades, state control over the operation of public education has increased. One reason may be that in almost all states, the financing of public education now requires that an ever-larger proportion of funding come from state rather than local sources (Campbell et al., 1987).

Prior to the passage of the No Child Left Behind Act, there were few times when the federal government extended its reach so far into education that public schools had little discretion for interpretation. In 1896, the U. S. Supreme Court Decision of *Plessy v. Ferguson* found that the "separate but equal" doctrine was applicable in public schools, giving permission for white and black students to attend separate schools. Not until *Brown v. Board of Education of Topeka* in 1954 did the federal government intervene in education again, this time forcing the desegregation of public schools. Then, in 1971-72, Congress passed Title IX (Public Law 94-318). This measure was designed to combat sex discrimination in schools and colleges. A fourth example of direct federal involvement in public schools is found in Public Law 94-142, which Congress passed in 1975 to improve the education of handicapped students. This law stipulated that all handicapped children shall have "a free appropriate public education… provided at no cost to the parents or guardians" (U. S. Department of Education).

The beginning of the 21st century provides another rare example of federal policy extending to the local level with the No Child Left Behind Act. The NCLB policy mandates that states construct systems of accountability to improve student learning (McGuinn, 2005). Hanushek (2004) describes NCLB as a mixture of "public monitoring and reporting of student outcomes" (p. 28) combined with consequences for not meeting outcomes.

The basic framework of NCLB accountability includes content standards, measurement, consequences and reporting:

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- *Content standards* determine what should be taught.
- *Measurement* mandates that students be tested. State standardized tests used in NCLB are summative assessments designed especially for the purpose of measuring a school's competence (Black, Harrison, Lee, Marshall, & Wiliam, 2004).
- *Consequences* mean that the outcomes of districts' and schools' efforts are scrutinized by state departments of education. Annual yearly progress (AYP) is used to benchmark progress towards complete proficiency among students. Districts and schools that fail to meet AYP goals face sanctions, the most severe of which is surrendering administrative power to the state or a private management company (See Appendix A).
- *Reporting* means that scores are made available to the public.

With NCLB being an unprecedented program, districts and schools are struggling to align classroom practice and assessment with federal performance demands. Although NCLB includes sanctions such as loss of funding if AYP is not met, it does not include supports to help schools best respond to test results, nor does it reward schools that are successful in meeting NCLB expectations.

It's in this context that the standards-based reform movement has promoted data use as a tool for problem solving. The primary challenge for school leaders today is to reconcile the demands of NCLB and other higher-level accountability policies and systems with traditional school practices and cultures of data use. Newman, King, and Rigdon (1997) describe this challenge as connecting internal accountability systems with external accountability systems. Traditional school practices and emerging differences are included in the sections that follow.

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**Classifications of Data**

To meet federal accountability demands today, schools use three broad categories of data: Large scale achievement test scores, school-wide descriptive data and classroom-based assessments. Supovitz and Klein (2003) present these as three useful sources of data for education leaders to consider for improving teaching and learning. First, they describe large scale achievement tests, which are state and district assessments. These are used to provide initial planning and goal setting, align instruction, plan professional development and develop a culture of inquiry. They then describe school-wide assessment data including tests, uniform collection of subject assessments, recorded grades and other measures that are used to shape instruction through the year. These data can address the needs of professional development, help schools plan academic supports and nurture the culture of inquiry. Last, Supovitz and Klein describe the use of individual teacher assessments with data such as portfolios of student projects and teacher-developed tests. These tools provide immediate feedback and help teachers adjust instruction based on the needs of the students.

As shown below, the actual use of these main types of assessments for decision-making has been explored in a variety of studies. Overall, the studies reveal great diversity in how schools use data and show that comprehensive data driven decision making systems are rarely in place.

A system that clearly links daily classroom practice and classroom-based assessments to the new high-stakes testing is only just emerging. To begin, Heritage and Yeagley (2005) found that large-scale achievement tests, benchmark assessments, formative assessments and grading were all used to provide achievement data to districts and guide school improvement. However, they also found that the NCLB-mandated achievement tests provide stakeholders only with

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general information about student performance – not the data needed to make timely decisions about programs, schools and districts. The high stakes tests' ability to provide just-in-time data for instructional improvement is very limited (Shepard, 2005).

The Heritage and Yeagley study emphasizes that practitioners require timely, accurate and specific information about student learning to inform their decisions for teaching and learning and to guide continuous improvement efforts. Data from district-level benchmark assessments and formal classroom-based assessments are more useful than state data in this regard because they are given periodically throughout the school year and measure salient topics and themes from the curriculum.

Classroom-based assessments are especially useful to practitioners at the building level because they are immediate and reflect the scope of curricula taught in classrooms. Unlike standardized tests, which are simply summative, classroom assessments are formative in nature (Black & Wiliam, 1998, Black et al., 2004) or ideally "used to adapt the teaching work to meet the learning needs" (Black et al., 2004, p. 2). They help practitioners generate hypotheses about student learning and can guide intervention efforts (Shepard, 2010). Despite the usefulness of classroom assessments for practitioners, however, they will not satisfy the needs of policymakers (Salinger, 2001; Shepard, 2000).

Some schools take advantage of benefits offered by all three types of data that Supovitz and Klein (2003) identify. For example, Wayman and Stringfield (2006) studied three schools that had implemented school-wide efforts to use data. They found that principals triangulated data such as state tests, school-wide assessments and teacher-generated assessments to get more comprehensive views of student learning. Similarly, Anderson, Leithwood, and Strauss (2010) examined the use of data by principals and teachers and found that a significant proportion of the

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principals they interviewed used multiple data sources including state-mandated assessments, district developed tests and teacher or school based assessments to determine rates of student learning.

Still, the degree to which data were used to identify, understand and respond to student learning needs varied among the districts and schools in the Anderson, Leithwood, and Strauss study (2010). For example, they found that the majority of principals overlooked data about conditions that might help explain student performance. Instead, they only used the data when complying with requirements to submit reports. A minority of administrators went beyond using data for problem identification to problem solving (Anderson, Leithwood, & Strauss, 2010; Heritage & Yeagley, 2005).

**Unintended consequences of NCLB**

Researchers point to unintended outcomes of the current high-stakes accountability system. Without there being an effective data feedback cycle in place, teachers who are under pressure to demonstrate students' proficiency levels tend to narrow the scope of their curricula so that more emphasis is placed on material that's covered by state tests (Stretcher & Barron, 2002). The resulting curriculum that is taught is a less rigorous version of the intended state curriculum (Strecher & Hamilton, 2002).

A pressing issue that emerges in this review is the need to link classroom-based assessments to higher-level testing. One explanation given for the lag in development and design of classroom based measures is the disproportionate amount of funding given to the development of large-scale measures (Stiggins, 2001). Stiggins proposes that for every dollar spent on large-scale assessments, another dollar be given to the development of classroom assessments (2002). His aim is to provide teachers with relevant, timely, meaningful assessment

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information about student learning from both external assessments such as state tests and internal assessments such as classroom tests.

In 2001 the National Research Council (NRC) outlined a plan for a coordinated system of assessments that would meet the needs of both policymakers at the national and state levels as well as practitioners at the district and school levels. In *Knowing What Students Know* (NRC, 2001) the committee outlines three qualities for a proposed comprehensive assessment system. First, the system includes a variety of approaches to measurement so that decisions at the stakeholder levels will reflect multiple data points. Second, it's to be developed around one model of learning with the same type of constructs used for both large-scale measures and classroom based measures. Third, it provides for using student achievement data longitudinally (Heritage & Yeagley, 2005). In the comprehensive assessment system proposed by the NRC, decision makers at all levels would have access to relevant data for monitoring and evaluating (Heritage & Yeagley 2005). This plan has yet to be developed or implemented.

Additionally, a review of the literature suggests that a more effective data use system would include teachers' less formal classroom assessments. Although the academic community has mistrusted information observed or experienced informally by teachers and administrators through their ordinary workplace practices (Little, 1990), this information is highly valued by the observers themselves and shouldn't be discounted in a comprehensive data driven decision making model. As Wilson points out, "Assessment information drawn from standardized tests represents no more than a drop in the bucket of all assessment information that is gathered in a typical classroom" (2001, p. 2). In fact, at the school level, practitioners are most likely to use their own judgments as evaluative measures of student progress. Opportunities to informally gather data by talking with students and parents or by observing teaching practices are readily

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available to teachers and school leaders as they go about the school day. Marsh, Payne, Hamilton, (2006) found school staff's growing use of data that they generated from talking with students, looking at student work and observing teacher practices. The principals "perceive these systems of local progress tests as powerful tools for school improvement – particularly when compared to state tests" (p. 5).

**Professionalism in question**

The importance of teachers' own impressions has been documented. For instance, Lortie wrote about the importance of teachers' own impressions in 1975. He interviewed nearly 100 teachers and surveyed nearly 6000 teachers. He concluded that the teaching profession is characterized by individualism, which he defined as the tendency of teachers to experience the work of teaching as a matter of personal preference, experience or knowledge rather than one grounded in an accepted body of knowledge and practice. Similarly, Philip Jackson (1968) observed in a study about knowledge acquisition that "Rarely, if ever, did (teachers) turn to evidence beyond their own to justify their personal preferences."

A culture of individualism also means that communication among teachers about their experiences and observations may be limited. Lortie (1975) called this the "egg-carton" conundrum. The sentiment was echoed in Rosenholtz's study (1989) of 78 elementary schools, which found that teachers most often work in isolation from one another and from other school professionals. When teachers have opportunities to talk with one another, discussion is oftentimes limited to sharing experiences or "war stories" about problem students or parents. The study confirmed Rosenholtz's earlier contention that "While teachers' 'experience swapping' …produces sympathy and social support…it does little to end teachers' isolation from professional knowledge" (Rosenholtz & Kyle, 1984 p. 12).

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As discussed later in this review, establishing professional learning communities is one way to help teachers share their observations and experiences and develop new strategies together. Sharing informal data purposefully for decision making can be the basis for helping to improve students' performance on summative assessments. And, as I point out in the next section, teachers' beliefs about their efficacy or ability to impact the learning environment play a powerful role in achieving learning outcomes, despite the extent to which teachers work in isolation from one another.

## Teachers' Efficacy

A teacher's sense of efficacy is a belief in his or her capabilities to achieve desired classroom outcomes of student engagement and learning, even among those students who may be difficult or unmotivated (Ashton & Webb, 1982, 1986). Teacher's sense of efficacy has been related to student outcomes such as achievement in reading and math, motivation and students' own sense of efficacy (Gibson & Dembo, 1984; Woolfolk & Hoy, 1990). Research has identified three types of teacher efficacy: General teacher efficacy, self-efficacy, and collective efficacy.

General teacher efficacy reflects teachers' beliefs about their ability to influence student learning given such student factors as family background and the value placed on education at home, IQ, and school conditions (Tschannen-Moran & Hoy, 2001). Conflict, violence, poverty, and the psychological, emotional and cognitive needs of a particular child are among the many factors that can have an impact on student's motivation and performance in school (American Psychological Association website, 2012). Teachers with a strong sense of general efficacy maintain the disposition that they possess either naturally or through experience the ability to empower all children to learn.

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Self-efficacy beliefs are teachers' evaluations of their own abilities to bring about positive student change. A self-efficacy belief is more specific and individual than a belief about what teachers in general can accomplish. Teachers who believe that student learning can be influenced by effective teaching, and who also have confidence in their own teaching abilities, provide a greater academic focus in the classroom and exhibit different types of feedback than teachers who have lower expectations concerning their ability to influence student learning (Ashton & Webb, 1982, 1986; Gibson & Dembo, 1984, Woolfolk & Hoy, 1990).

Collective teacher efficacy is the perception of teachers in a school that the efforts of the faculty as a whole will have a positive effect on students. Researchers have established strong connections between teacher efficacy and teacher behaviors that foster students' achievement. (Bandura, 1993; Goddard, Hoy & Hoy, 2000).

Not only do teachers' shared efficacy beliefs shape the culture of schools, they also relate to their own behavior in the classroom. Efficacy influences the effort they invest in teaching, the goals they set, and their level of aspiration (Goddard, et al. 2000). Teachers with high efficacy beliefs are more open to new ideas and are more willing to experiment with new methods to better meet the needs of their students (Goddard, et al., 2000).

**Summative and Formative Assessments**

High-level policymakers have touted the NCLB system of testing and sanctioning as an effective tool for school reform and improvement (Bush, 2002). However, practitioners at the district and school levels have realized the limitations of the data that mandatory state standardized tests provide. These annual tests are summative; they provide information about performance from one testing date per year. The tests are not calibrated to provide practitioners with timely, relevant information about student achievement. Teachers need "play-by-play"

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information about each student's achievement in order to make instructional decisions that make learning meaningful for every child (Stiggins, 2002). In other words, formative assessments are needed to support better performance on summative assessments.

Stiggins distinguishes between *assessments of learning* and *assessments for learning*. "The crucial distinction is between assessment to determine the status of learning and assessment to promote greater learning" (Stiggins, 2002). Summative assessments *of* learning, such as state standardized tests, provide evidence of achievement for public reporting. Assessments *for* learning serve to help students learn more. These are called formative assessments.

A formative assessment fosters the recognition of student learning while the learning is taking place and encourages responses that help meet learner's needs (Cowie & Bell, 1999; Shepard et al., 2005, Black et al., 2004). It informs teachers as well as students about levels of understanding once content has been delivered, and it provides evidence to help teachers make the best decision about subsequent instruction, whether that means moving on to the next lesson or re-teaching the content (Black & Wiliam, 1998;Leahy, Lyon, Thompson & Wiliam, 2005). Formative assessments establish the current level of understanding, what needs to take place next, and ways to support a learner in getting there (Wiliam, 2011).

Shepard (2008) developed a formative model of classroom assessment that supports teaching and learning from a constructivist framework. In other words, learning happens through actively making sense of a curriculum. Assessments measure student learning processes as well as outcomes, provide formative information integrated with instruction, and reflect teaching as well as learning. "In the classroom context, teachers may well provide help while assessing to take advantage of the learning opportunity, to gain insight into a child's thinking,

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and to see what kinds of help make it possible to take the next steps" (Shepard, Kagan, & Wurtz, 1998).

Empirical evidence shows that formative assessment is a necessary component of meaningful daily learning. Not only does it increase student understanding day to day, but it also raises standards of achievement on standardized summative measures (Black & Wiliam, 1998). This happens in part because of increased awareness of classroom learning by both teachers and students. Wiliam (2009) adds that the decisions made as a result of formative assessment are more informed than those made without it and therefore better serve the teacher and student.

Black and Wiliam's (1998) analysis of the role of assessments in student learning found significant positive effects on student achievement across all content areas, knowledge, and skill types for all grade levels. They found that formative feedback to strengthen student learning plays out on three levels in the classroom: The individual teacher level, the individual student level, and at the level of teacher-student interaction.

In 2004 Black et al. studied the impact of formative assessments on the teaching practice of 24 teachers of math and science in England. Not only did the formative assessments appear to improve the motivation and attitudes of students, but they also seemed to improve the state test scores of those students participating in the study compared to students who did not. Teachers who participated in the study showed improved questioning techniques and gave more meaningful feedback to students. Formative assessments can help teachers present more information than they might in a tracked learning system.

Looking further into the data, Black and Wiliam (1998) reported that "formative assessment helps low achievers more than other students and so reduces the range of achievement while raising achievement overall." This finding was also shown by Reeves' (2003)

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work with 90/90/90 Schools, which are schools characterized by three student factors: 90% qualify for free or reduced price lunch, 90% are from ethnic minorities, and 90% meet or achieve high academic standards. Reeves (2002) adds that the strongest evidence of improved learning gains happens when formative assessments are used multiple times within a single lesson or when teachers use the assessment to guide instructional practice. Reeves (2003) found school success when there was an acute focus on student achievement prompted by frequent checks for understanding through formative assessments within the classroom and multiple opportunities to learn.

## Instructional Leadership

The importance of instructional leadership is another salient theme in recent literature. Educational researchers most commonly identify four instructional leadership roles: Resource provider, instructional resource, communicator and visible presence (Leithwood, Jantzi, & Steinbach, 1999). Blasé and Blasé (1998) added characteristics more closely aligned to teaching and learning: Collaboration, coaching, use of data to inform instructional practice, and focus on building a community of learners. Elmore (2000) and Schmoker (2006) described the role of the instructional principal as an instructional leader who makes instruction the priority in the school and creates a student-centered environment. And, Elmore (2000) goes on to list specific practices that instructional leaders weave into their practice including guiding school improvement by frequently monitoring information about school performance, focusing on supporting teachers in the classroom, and prioritizing academics. These practices require principals to observe teaching and learning in the classrooms, use data from multiple sources, and create time for the staff to learn.

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Between 1980 and 1995, academics identified a dearth in studies of the relationships among leadership, teaching and student achievement (Leithwood, Begley & Cousins, 1990). Only three of the 40 studies conducted during this time demonstrated direct and indirect links between leadership and student achievement (Blasé & Kirby, 2000). For instance, a study completed by Russell, Marrow, Giley, Russell & Strope, (1985) describes 100 different effective principal behaviors and links them to characteristics of effective schools. Brossert et al. (1982) introduced a model that links principals' actions to instructional climate and instructional organization. Student achievement outcomes are viewed as an indirect result of principals' actions. This model was tested by Heck, Larsen & Marcoulides (1990) who found behaviors such as developing school goals and securing resources for programs positively affected student's achievement.

Surprisingly, Witziers, Bosker, and Kruger (2003) found almost no direct relationship between the role of the principal and student achievement in their analysis of 37 international studies. Intrigued by these results, Marzano, Walters and McNulty (2005) conducted a meta-analysis of 69 studies involving nearly 3,000 schools, 1.4 million students and 14,000 teachers. They calculated the correlation between leadership behavior and student achievement to be .25. This is statistically significant and suggests that a principal's behavior has a profound effect on student learning (Marzano et al., 2005). Among the 21 categories of principal behavior that Marzano et al. found associated with student achievement is the use of data to monitor the effectiveness of school practices or their impact on student learning. This had one of the higher correlations, .27. Other categories include involvement with curriculum, instruction and assessment (.20) and knowledge of curriculum, instruction and assessment (.25). Specific behaviors associated with these responsibilities are "continually monitoring the effectiveness of

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the school's curricular, instructional and assessment practices and being continually aware of the impact of the school's practices on student achievement" (Marzano et al., 2005, p. 56).

**Distributed Leadership**

Instructional leadership for today's learning goals is most effective when it's shared or distributed (Elmore, 2000; King, 2002; Spillane et al., 2001). "Rather than seeing leadership practice as solely a function of an individual's ability, skill, charisma and/or cognition, we argue that leadership is best understood as a practice distributed over leaders, followers, and their situation in the execution of particular leadership tasks," (Spillane, et al., 2004). Under distributed leadership, staff members share the responsibility and authority for how educators direct instruction and learn about instruction. Sharing involvement in decision making builds unity, improves morale, and improves the quality of decisions (Blasé & Kirby, 2000).

In particular, researchers (Elmore, 1999; Copland, 2003; Leithwood et al., 2004; Spillane et al., 2004) have explored how distributing the leadership in school can have meaningful effects upon building a community of practice. As Elmore (1999) explains, school staff may learn new behaviors that are associated with collective responsibility for teaching practices and student learning. Distributed leadership mobilizes school personnel "to notice, face and take on tasks of changing instruction as well as harnessing and mobilizing the resources needed to support the transformation of teaching and learning" (Spillane, et al., 2004). The enhanced individual decisions of teachers and the principal can add up to a collective benefit for student learning.

Stretching the task of leadership across many stakeholders also encourages leaders, teachers and other stakeholders to interact, thus eliminating Lortie's "egg carton" conundrum (Lortie, 1975) in which teachers are isolated in their classrooms and less able to discuss instructional issues with peers. Diamond (2007) observes that leadership within a distributed

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framework can provide opportunities for participants to influence others' practices in ways that bring about "a major change in form, nature and function of some phenomenon." Similarly, Spillane et al. (2003) and Copland (2003) found distributed leadership to be paramount to creating school structures conducive to data dialogue. They see distributed leadership as providing a framework to support multiple stakeholders interacting around the use of data to inform instruction. Copland (2003) indicates that as inquiry through data use occurs among participants, leadership begins to distribute and new teacher leaders' skills emerge.

**Professional Learning Communities**

DuFour and Eaker (1998) use the term "professional learning community" to describe how educators can move beyond the factory-focused model that has pervaded education since the early 1900s. They argue that the factory model of sorting and selecting students is not aligned with society's needs for the 21st century: That all students master content, become reflective learners, pursue employment and compete globally (Du Four & Eaker, 1998). Moreover, the notion that jobs are performed in isolation with one appointed person responsible for tying together all of the loose ends is similarly dated. As a result, the factory model has led schools to become "data rich but information poor," according to the same authors (DuFour, Eaker; DuFour, Eaker, Karhnek, 2010). They suggest that the challenge facing schools is what to do with the information provided by the data. DuFour and Eaker (1998) maintain, "There is growing evidence that the best hope for significant school improvement is transforming schools into professional learning communities" (p. 17). They describe results-oriented professional learning communities as not only welcoming data but also turning data into useful and relevant information for staff. Their concept has been widely accepted and praised by practitioners and researchers alike who respect the research showing its value in comprehensive school reform.

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Professional learning communities consist of "educators committed to working collaboratively in ongoing processes of collective inquiry and action research to better results for the students they serve" (DuFour, DuFour, Eaker, and Many, 2006). Du Four, Du Four, and Eaker (1998, 2008) identify six characteristics of professional learning communities in schools:

1. Shared mission, vision and values
2. Collective inquiry
3. Collaborative teams
4. Action orientation and information
5. Continuous improvement
6. Results orientation

One advantage of learning communities is improved collaboration among school leaders and teachers to improve instruction. Fullan (1993) had identified a major challenge to creating professional learning communities: The need to develop a critical mass of teachers who are catalysts for change and prepared to move forward with school improvement. Traditionally, teachers have been largely left to work in isolation. This has resulted in stagnated improvement efforts or the random rather than systematic implementation of ideas.

Du Four and Eaker argue that a critical mass and effective processes will emerge naturally through the active facilitation of professional learning communities. Teachers' support for professional learning communities will develop provided they see connections between their skills and the work at hand. The bridge is built over time through leaders' effective and consistent communication about the mission, vision, values and goals of the organization; through a culture of shared values; and in a collaborative environment for teachers to form a learning community (1998). By attending to culture, norms, and school policy the principal can

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create a structure that is accepted within the school for the learning community to become integrated into the fabric of the school (Mc Laughlin & Talbert, 2006; Halverson et al., 2005). Overall, successful schools and districts using the learning community approach focus on working together toward common goals (Schmoker, 2006).

Professional learning communities that use data to inform practice have been found to have significant impact on student learning (Lachat & Smith, 2005; Seashore Louis, Marks & Kruse, 1996). One reason is that the development of professional learning communities helps practitioners' focus shift from teaching to learning. McLeod (2005) also found that schools organized into professional learning communities realized gains from using data as part of the results oriented continuous improvement cycle. He named two dynamics that emerge: Frequent formative assessment and focused instructional interventions. These elements accelerated achievement gains. When teachers learn together using data, an increased school wide knowledge base for improving instruction develops (Wayman et al., 2006).

Wayman and Stringfield (2006) noted that principals who worked directly with teachers found a high degree of buy-in when teaching them to use data to inform their instruction. Still, the authors caution that many in education pay lip service to selective ideas about the process without investing in a total transformation of the school culture (DuFour, DuFour, and Eaker, 2010). Partial investments in school transformation fall short of achieving the kind of change that the authors believe is necessary.

**Internal and External Accountability Systems**

Internal accountability is a necessary and critical component for schools to meet the demands of current external accountability systems (McLaughlin, 1987; Fullan, 1986). Spillane, Reiser, and Reimer (2002) contend that "policy ideas work as levers for change only if policy

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makers convince implementing agents to think differently about their behavior, prompting them to raise questions about their existing behavior and encourage them to construct alternate ways of doing business" (p. 421). However, for several decades organizational theorists have described schools as "loosely-coupled" organizations (Meyer & Rowan, 1975; Weick, 1976). From this perspective, the primary work of schooling, teaching and learning, is only loosely linked to the administrative structures of the school. This is understandable considering the factory model from which school systems were developed. Instruction performed within individual classrooms is typically isolated from the teaching practices going on in other classrooms, even within the same school. In addition, teachers' professional autonomy may serve to shield them from efforts to change practices initiated by educational administrators at the district, state or higher order system levels. As a result, the core of instruction is resilient to external influences for change (Swanson & Stevenson, 2002).

Elmore (2005) points out, "The strongest initial predictors of the impact of policy on student performance are the attributes of schools rather than the attributes of the policies themselves" (p. 288). In order for school leaders to react to external accountability pressures in constructive and productive ways, they must first tie together their knowledge, beliefs and experiences of the school context in which the policy is to be implemented (Spillane, Reiser, & Reimer, 2002). Then, leaders can develop a coherent view of their organization and are able to more clearly communicate the norms and expectations about instruction and assessment (Murnane, Boudett, & City, 2008).

## Data Informed Leadership

In an effort to meet NCLB demands, school leaders are using data to inform their instructional, operational and programmatic decisions (Knapp, et al., 2006). For the purpose of

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this study, their use of data will be narrowed to include aspects of principal leadership related to instruction in schools and classrooms.

The literature uses three terms to describe data use in schools; *data driven decision making* and *data-based decision making* are both used in the current context of accountability and school reform. However, Knapp et al., (2007) offer the term *data informed leadership* to fully describe the scope of thinking about and acting upon data. First, they point out that data driven instruction is a misnomer because many factors are taken into consideration when a decision is made including interests, ideologies and instructional context (Weiss, 1995). Second, the abundance of data available to educators provides opportunity for data to be used to prompt questions, reflection and deliberation about the best next steps in decision making (Coburn & Talbert, 2006). Because data can serve a range of uses, this study will use the term, data informed leadership.

Schools benefit from leaders who use data to make decisions (Halverson, Prichett, Watson, 2007; Halverson et al., 2005). Fuhrman (1999) found that schools labeled "inadequate" based on federal accountability measures were not using data for instructional decisions. Similarly, in another study, Boudett et al. (2007) found that data use did not become part of school-wide reform if it was not actively embraced by the school principal. Principals play a major role in identifying targets for educational improvement, setting expectations for staff participation in data-informed decision-making and making resources such as time available to support the process. Knapp et al. (2006) researched the way principals go about making informed decisions using an inquiry approach. As shown in Figure 1 below, their findings reveal five distinct phases of the inquiry process involved in decision making. Their model includes the role of data in the decision making process.

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The cycle begins with focusing and (re)framing the problem(s) for inquiry. During this stage the principal frames the problem to include multiple vantage points to give a context for the use of data (Bolman & Deal, 1997). Once the issues are apparent, the principal collects relevant data, using available tools, resources and/or strategies from "organizational learning" (Honig, 2006). Once a saturation point is reached in data collection, the principal makes sense of the data and then takes action. Research cautions leaders against making quick conclusions from the data (Coburn & Talbert, 2006) and advises leaders to fully understand the range of influences impacting data before reaching a firm decision. Action steps are communicated to relevant stakeholders and regular short term feedback is collected.

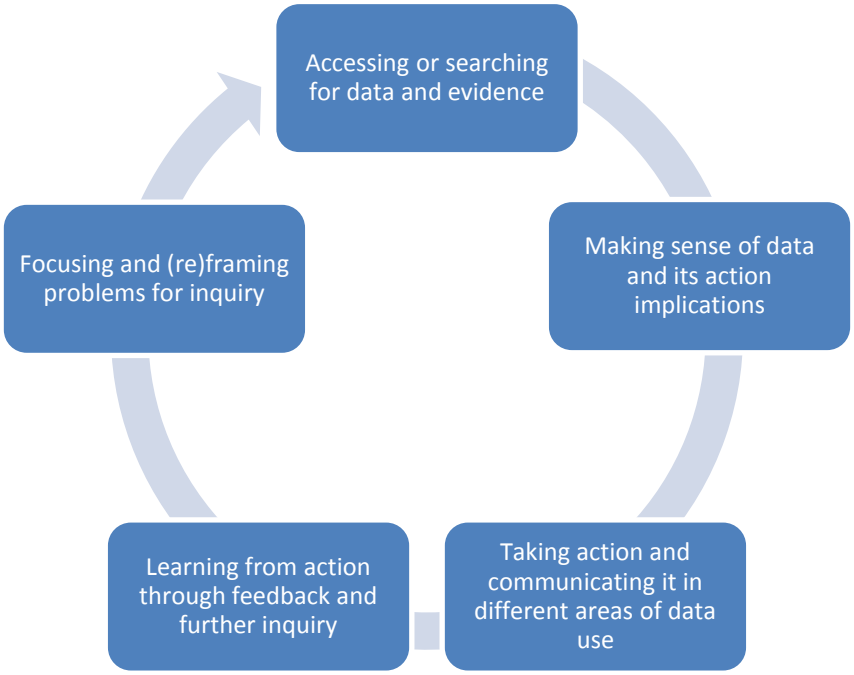


*Figure 2.2:* Culture and Cycles of Inquiry (Knapp et al., 2007)

While this framework appears logical and straightforward, the actual process may be messy and cumbersome. This may be especially true if the principal has limited experience with or comfort with cycles of inquiry. Nevertheless, the cycle of inquiry offers leaders a way to

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think about problems and consider what might be learned from data about practice (Knapp, et al.,2007).

The principal is often the person who is ultimately responsible for the success of school reform efforts, but schools benefit when leaders establish inclusive practices that engage many practitioners in developing a shared vision (Knapp, et al., 2005).

Sharing the leadership role with others is a central part of the culture of inquiry. The participants many times become co-leaders or co-facilitators in data-informed problem solving.

Moreover, creating a shared vision reduces variance in practitioners' understanding. For example, the literature reveals that practitioners have different understandings of key concepts such as teaching and learning and assessment (Black & Wiliam, 1998). The inquiry process helps practitioners identify common understandings about fundamental concepts about the work at hand, e.g., how to use data to improve teaching and learning (Wayman, Cho, Johnson, 2007).

A related model of data-driven decision making (DDDM) in education refers to multiple school stakeholder groups (e.g., teachers, principals and administrators) collecting and analyzing data to inform decisions and better promote student success. Multiple sources of data are turned into information through analysis and are then combined with stakeholder understanding and expertise to create actionable knowledge (Ikemoto & Marsh, 2007).

The first steps of DDDM involve collecting and organizing relevant data. Next, data are analyzed through the local context. The analysis can inform actionable decisions based on the situation and priorities of the data users. Once the decision to act has been made and implemented, new data can be collected to assess the effectiveness of those actions, leading to a continuous cycle of collection, organization, and synthesis of data in support of decision making. (Ikemoto & Marsh, 2007).

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Halverson et al. (2005) developed a data-driven instructional systems (DDIS) model to define the structures and practices that leaders have used to develop capacity within schools. DDIS are feedback systems for building organizational capacity to meet accountability demands. These systems of practice are dedicated to making summative data such as state test data useful for improving teaching and learning in schools. The value of using this systematic approach is found in studies of schools that have been able to improve student learning. These schools have utilized internal systems that are capable of synthesizing relevant, existing data for sense making (Halverson, 2003; Burch & Spillane, 2003; Gamoran, Anderson, & Ashmann, 2003).

Halverson et al.'s (2005) model of DDIS features six component functions: data acquisition, data reflection, program alignment, program design, formative feedback, and test preparation. Schools can use these six components to align their thoughts and actions regarding student achievement data and the best instructional practices to inform teaching and learning. In a data-driven instructional system, leaders take an active role to link these components into structures so that information can flow in a specific, timely and relevant way that impacts student learning. Each component of the DDIS is described briefly below. A figure illustrating the system follows.

1. *Data acquisition* involves collecting timely, relevant and meaningful information to guide teaching and learning. The primary data are student standardized achievement test scores.
2. *Data reflection* includes the processes developed to make sense of student learning data so that goals to improve student teaching and learning are achieved. This takes shape as structured opportunities for teachers and leaders to collaboratively make sense of data.

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3. *Program alignment* puts into place processes to organize the school's instructional program so that content and performance standards align with what is actually taught in classrooms.
4. *Program design* enables a school to act on perceived instructional needs by creating or adapting curricula, pedagogies, student services programs and instructional strategies to improve student learning.
5. *Formative feedback* produces iterative evaluation cycles designed to create ongoing timely flows of information to improve both student learning and instructional program quality across the school.
6. *Test preparation* includes activities designed to motivate students and to develop strategies for improving their performance on state and district assessments.

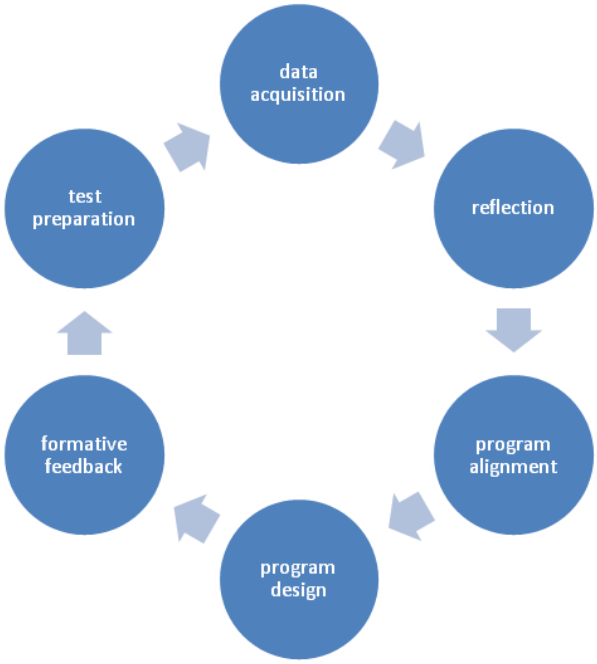


*Figure 2.3*: Data Driven Instructional Systems (Halverson et al., 2005).

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Halverson et al.'s (2005) study resulted in a streamlined process of gathering, interpreting and using student learning data.

In 2007 Halverson, Prichett, and Watson continued the research on data driven instructional systems by examining formative feedback systems. According to the authors, "formative feedback systems are systems of structures, people and practices that help teachers and administrators translate testing data into practical information for everyday use" (p. 3).

Halverson et al. (2007) proposed a model to describe three key functions of formative feedback systems: *Intervention*, *assessment* and *actuation*. *Intervention* is used to describe the tools and resources used for groups of students to improve their learning. This includes but is not limited to textbooks, experiments, worksheets, computer programs etc. This also includes individualized education programs (IEP's) as a customized program for learning (Halverson & Thomas, 2007). *Assessments* measure how well students have learned what was intended for them to learn. Assessments ideally are used as a reflection for teachers to determine the effectiveness of their instruction. They provide an indicator of areas where teachers could revise instruction to meet learning needs. *Actuation* refers to the process through which faculty and staff process, interpret and act upon the effects of their interventions on student learning. This takes shape as faculty meetings, grade level meetings, collaborative meetings or other designated time for teachers to reflect and make sense of the data so that adjustments are well-informed.

The findings from both studies by Halverson et al. (2007) demonstrate how school leaders and teachers are using data-driven instructional systems and formative feedback systems to support decision making, thereby customizing their instructional programs so that all students have opportunities to learn.

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Ikemoto and Marsh (2007) present additional findings highlighting how data-driven decision making, unlike the streamlined process described above, can be a messy process that's complicated by several factors. These factors relate to the potential for great variability among stakeholders' methods of collecting, analyzing, and acting upon data. They argue that while educators often mistakenly believe that they're already using inquiry-focused data model, their efforts are actually more limited. For example, a school might rely on aggregated data instead of disaggregated data and may or may not use data triangulation. Ikemoto and Marsh identify four overall levels of data use sophistication: Basic; analysis-focused; data-focused; and inquiry-focused. They concluded:

> Although we found instances of all four models being used in practice, educators in the sample tended to use simpler forms that focused on narrow types of data—primarily state test scores—and limited analysis procedures. Although these educators professed to being "totally data driven," it was not clear they understood that being data-driven could also mean something very different from what they were pursuing.

Anderson, Leithwood, and Strauss (2010) built upon findings from Ikemoto and Marsh (2007) to further investigate school principals' data use practices. A compelling conclusion from their findings is the principals' focus on numbers rather than on conditions leading to the data. The authors describe this as "single loop learning," a basic cycle of finding and analyzing data for decision making. Much more powerful is "double loop learning" in which practitioners not only analyze the data but also consider the assumptions behind their current understandings and practices (Argyris & Schon, 1974). This kind of analysis leads to deeper understanding about the factors contributing to test score results. The authors go on to suggest that the term "data for

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decision making" ought to be replaced by "data for problem solving" in light of the rich understanding afforded by double loop learning. When practitioners fail to recognize the complexity of school data, they risk making relatively uninformed decisions (Anderson, et al., 2010). The research on providing inclusive practices parallels findings that data-informed leadership is distributed across many participants (Elmore, 2000; Spillane & Camburn, 2006) and is part of the work of transforming schools through the implementation of professional learning communities. This begs the question, how does one effectively quantify the qualitative aspect of learning?

Although some aspects of data-driven decision making in K-12 education have been widely researched, such as types of data to analyze, analytic approaches, and biases in testing models, there is a gap in the literature regarding how key stakeholders such as principals and teachers actually engage with and use the data. There is a need to understand what structures and supports are in place to promote the effective use of data in school and classroom practice. This information could help identify areas of strength and weakness within a given school district. The ideal end results of applying this knowledge would be improved student learning and the more efficient use of district resources.

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## Chapter 3: Methods

Current research about student test performance points to the importance of using data for instructional decision-making at the district, school and classroom levels. The purpose of this study was to gain understanding about how personnel in one academically successful urban elementary school use data to guide instructional decisions. Students at this school largely represent low socio-economic levels as measured by qualification for free and reduced price school meals. Typically schools with this demographic profile score in the minimal or basic category on the Knowledge and Concepts Exam (KCE) in the areas of reading and math; yet the majority of students in this school, since the onset of the KCE, consistently score in the proficient or advanced categories in reading and math. This study examined the extent to which participants use data systems and processes to drive instructional decision making including:

1. The structures and strategies used for data driven decision making.
2. The school principal's roles in the use of data for decision making.
3. The teachers' role in the use of data.
4. The involvement of other stakeholders**.**

The following illustration (3.4) provides a visual display of the sections discussed in this chapter.

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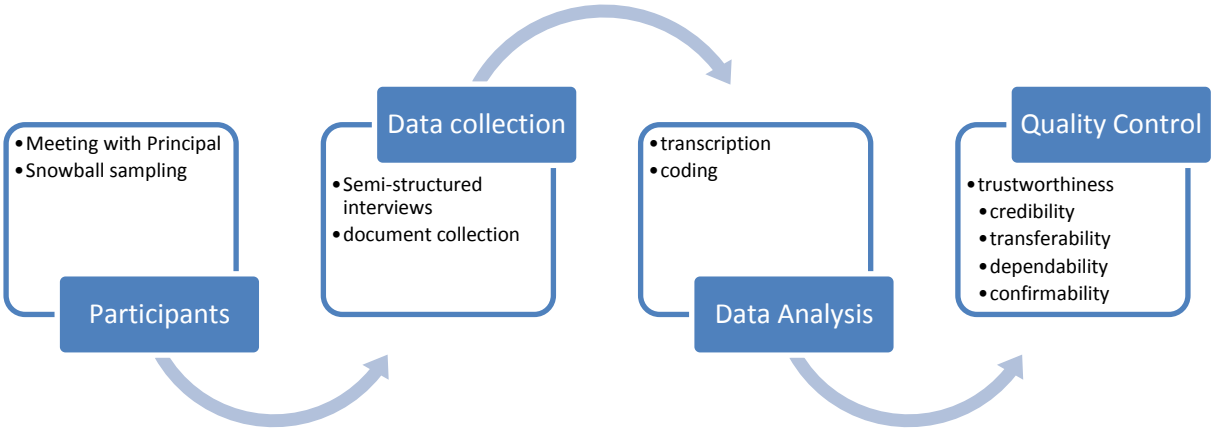


**Strengths of Employing a Case Study**

Through this case study I gained better understanding of Friendship School. Case study research encompasses the nature of the case, the case's historical background, the physical location and the informants through whom the case can be known (Lincoln & Guba, 2000). The stories of those immersed in the case were teased out so that their multiple perspectives informed the research questions (Lewis, 2003).

This study was inspired by the unusual case of students' relatively high test scores at a low-SES school, based on quantitative data and analyses. However, most data for this dissertation were collected through a qualitative case study. My research topic was especially amenable to investigation with qualitative methods since, as Merriam (1998) asserts, qualitative methods can be used to gain new perspectives on phenomena or to present information that is difficult to express quantitatively. Moreover, qualitative research can focus on contextualized meaning and seek understanding from participants' viewpoints.

The ability of qualitative data to richly describe a phenomenon is an important consideration not only from the researcher's perspective but also from the reader's perspective:

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"If you want people to understand better than they otherwise might, provide them information in the form in which they usually experience it" (Lincoln & Guba, 1985). Because qualitative research is typically rich with description and insights into participants' experiences of the research topic, the authenticity of the information "may be epistemologically in harmony with the reader's experience" (Stake, 1978) and, thus, more meaningful.

The design strategy that guided the study is naturalistic inquiry. According to Lincoln and Guba naturalistic inquiry is a "'discovery-oriented' approach that minimizes investigator manipulation of the study setting and places no prior constraints on what the outcomes of the research will be" (2002). The researcher will documented the lived experience of participants who use data systems and processes: principals, teachers and other stakeholders. The sources of data were from the school setting. The researcher did not impose a structure or system on the school setting, nor did the researcher make assumptions about the case prior to data collection.

**Details of Approach**

Qualitative data were collected through two sources: Interviews and documents. I conducted interviews with the Superintendent, curriculum specialists, data specialists, the principal, teachers, and an external consultant. Interviews were conducted with 25 participants. The interview guide is located in Appendix E. Each formal interview was between 45 and 75 minutes long. These interviews were tape recorded and transcribed. Additionally, informal conversations were held with the principal on three occasions. These conversations were not tape recorded but information from these conversations was recorded in field notes. Examples of documents collected include the Regional Educational Support Agency data retreat model, Friendship's School Improvement Plan, and district learning targets.

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According to Onwuegbuzie and Collins (2007), sample sizes in qualitative research should not be too large that it is difficult to extract detailed, rich data. At the same time, the sample should not be too small that it is difficult to achieve data saturation, theoretical saturation, or informational redundancy (Lincoln & Guba, 1985). Having 25 interview participants provided me with multiple perspectives about how staff members with different job responsibilities use data for decision making. I also reached a point of saturation during the last few interviews; I realized that I was not obtaining new information, but rather was hearing relatively the same information that previous interviewees had expressed.

## Data Collection

Data were gathered through two means: Semi-structured interviews and document collection. Semi-structured interviews provided the flexibility to probe for further information as themes or topics emerged. The questions were open-ended so that each participant could share his or her unique experience (Lincoln and Guba, 2000). This provided rich information about the experience of each participant from which I was able to draw meaningful conclusions.

### Interviews

To achieve transparency about the purpose and focus of my research and to begin to establish trust within the district, I shared the interview guide with the school district and the building principal for approval before beginning the interviews at the school site. Once I obtained their permission to use the questions, I used the guide to help shape interviews and ensure that I asked similar questions of all participants so that the study would achieve dependability and confirmability (Creswell & Miller 2000).

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The questions were divided into three groups: Questions for teachers, questions for the principal, and questions for the district leader. There was some overlap among the questions in each group but some questions were designed to illuminate participants' special roles. I modified the interview guide over time to focus attention on areas of particular importance, to pursue emerging themes, and to exclude questions that were not serving the goals of the research as I had intended (Lofland and Lofland, 1984).

I was aware of the impact that any interviewer might have on participants' responses. While it has been reported that interviewer effects in a structured interview setting are minimal (Singer and Presser, 1989 in Lincoln and Guba, 2000), the interview is nevertheless a social experience and involves a relationship between the interviewer and the participant. I began each interview by providing the participants with a brief description of the purpose of the interview and the goals of the research. I assured each participant that their answers would be confidential. In this way, I established rapport with the interviewees while also establishing what Lincoln and Guba (2000) call "balanced rapport." As the interviews took place, I remained attentive to the participants and actively listened to their responses, yet I refrained from adding my own comments or opinions. Converse and Schuman recommend the interviewer engage in "interested listening" by recognizing the interviewee's experience without going so far as to evaluate their response (Converse & Schuman 1974 in Lincoln & Guba, 2000).

I gathered data from interviews through my written notes and tapes of the interviews. I jotted notes during the interviews to include specific comments and perceptible emotions. With consent from the interviewees, I recorded the interviews and transcribed the information verbatim.

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**Documents**

Documents were the second form of data collected to inform this case study. They expanded my understanding of the case by revealing information about programs and processes that could not be observed (Whitt, 2001). Documents were collected from a number of sources including the regional education agency data retreat model, the School Improvement Plan, district learning targets and data recordkeeping systems. I used the documents in two ways. First, I used them to collect new information about events, decisions, activities and processes (Whitt, 2001). And, second, I used the documents to cross-check the information presented by interviewees.

The document analyses contributed to rich, detailed description (Geertz, 1973) of the case study so that I was better able to understand the structures and supports for data use by the principal, teachers and other stakeholders. Merriam (1998) defines "thick description" as a term used in anthropology to mean a thorough, literal description of the case. The combination of document collection, interviews and field notes helped me achieve this level of detailed description within the context of my case study.

Field notes consist of a running commentary that I wrote to myself about what was happening in the research. I took notes during the data collection phase and the analysis phase. I wrote down whatever came to mind without much editing of information in order to leave all of my impressions available for use throughout the duration of the research and reporting. Also, I tried to ask myself relevant questions during the research and record my thoughts and reflections in my field notes. Moreover, I let the field notes guide some of my decisions. For example, I questioned whether I needed to interview additional participants and consulted my field notes to

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help me formulate a responsible answer. As another example, I used field notes to refine some of the interview questions in order to avoid redundancy and exhausting the participants.

## Data Analysis

Bogdan and Biklen (1982) define qualitative data analysis as "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (p. 145). Qualitative researchers generally use inductive analysis of data, meaning that the critical themes emerge out of the data (Patton, 1990) instead of being predetermined. Qualitative analysis requires the researcher to place raw data into logical, meaningful categories, to examine them for meaning and to find a way to communicate this interpretation to others.

After collecting data, I made clear notations including its date and place of collection and other identifying information for easy retrieval. I transcribed the interviews so that the transcripts from each interview accurately represented the thoughts of the interviewee. I created a second copy of interview transcripts to verify the first transcription for accuracy. I clarified any differences between the transcriptions by listening to the participant's recorded interview again. In addition, to prevent any unfortunate accident with the data, all data were copied and stored in secure areas.

Once my data collection reached a point of redundancy and saturation, I constructed a case record that served as a framework for organizing the data to create categories and themes (Patton, 1980). The case record included all of the major information I had about the case: Field notes, interviews, documents and reflective notes. Next, I read through the raw data multiple

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times to become familiar with the information, to sort through redundancies, and to formulate an organizational framework.

I then began the process of analyzing the data to answer the research questions. I began by reviewing the data through the lens of the research questions. I jotted down notes, comments, ideas and observations in the margins of the transcriptions and documents. "The notes serve to isolate the initially most striking, if not ultimately most important, aspects of the data" (Goetz & LeCompte, 1984). This process helped me identify major ideas surfacing in the data and served as a basis for a preliminary outline of the main points in the data. I then looked for patterns and regularities within the major ideas that were essential to understanding the participants' experiences (Patton, 2002). I also paid attention to non-examples or pieces of information that did not resonate with the prevailing pieces of information. In this way I began to understand the participants' experiences with data structures and supports. I jotted down these patterns, regularities and exceptions on individual note cards for further analysis.

After I reviewed each set of data, my next step was to code the information. Coding is a procedure that disaggregates the data, breaks it down into manageable segments and identifies or names those segments (Merriam, 1988). I organized the list of codes into a codebook that included a detailed description of each code, inclusion and exclusion criteria, and examples of actual text from the study for each theme.

I followed Lincoln and Guba's (1985) comparative technique to develop categories or themes while examining the notecards. I began by reading the first notecard and noting the information it contained, then, followed the same process for subsequent notecards, examining them for similarities. I grouped similar cards together, or, created two categories. If I came to a

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card that fit none of the categories and seemed irrelevant to the body of data, I set it aside in a miscellaneous pile for later examination. I developed initial codes for these categories or themes based on the data itself, the review of the literature, and preliminary ideas based on the initial readings. My goal was to identify and create preliminary categories into which the data could be grouped. Guba and Lincoln (1981) recommend developing categories around three guidelines: the frequency with which participants speaks to a topic or theme, the uniqueness of a category, and the quality of a category's contribution to the research question.

The next stage of analysis involved both convergent and divergent thinking to re-examine the categories I had previously identified. Convergent thinking determines to what extent things fit together, or how data can be linked into a single category or theme. I identified the categories that I formulated during the first step by assigning them names and compared and combined them in new ways to assemble the "big picture." Divergent thinking, on the other hand, creates a web of information to support data by making logical connections between different categories or themes so that the differences among the categories are transparent.

As relationships between themes and concepts emerged, I thought of coding as an iterative process of comparing and contrasting themes and concepts to look for similarities and differences. In this way, I used a modified constant comparative method to analyze the data (Glaser and Strauss, 1967).

In a similar manner, I reviewed the information in categories to ensure that there were no additional considerations that would lead the analysis in a new or different direction. I reviewed any data that fell outside the categories to make certain it didn't fit within one of the identified patterns. These anomalies are discussed in Chapter 4, the findings section of the dissertation.

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As I coded, I was highly engaged in monitoring my own thought process in order to avoid potential pitfalls. According to Thomas Schwandt (2007), the three most troublesome tendencies to be aware of in coding are: The tendency to code largely at the descriptive level rather than to code for the purposes of explaining or developing an understanding of "what's going on here"; the tendency to think of coding as a mechanical, straight-forward, algorithmic process, thereby ignoring the prior conceptualization and theoretical understandings that are involved; and the tendency to regard codes or categories as 'fixed' or unchanging labels thereby ignoring their organic, dynamic character (pp. 32-33).

Once the transcripts were analyzed, I went on to examine the documents. Separating the transcript analysis from the document analysis allowed me to find unique insights from different types of data. Moreover, when a pattern from one data source was corroborated by the evidence from another, the finding was stronger (Eisenhardt, 1989). When the evidence conflicted, I tried to reconcile the differences through further analysis.

## Quality Control

Establishing the trustworthiness of qualitative research is a key to understanding its significance. Qualitative studies set out to describe and explain a phenomenon through the eyes of participants. Given the expression of multiple perspectives, there is no way to establish reliability of the findings in the traditional sense. The word "reliability" is a mismatch for qualitative research. Rather, Lincoln and Guba (1985) present the idea of "trustworthiness" of the results obtained from data. Results are shown to make sense because they are consistent and dependable (Merraim, 1998). Trustworthiness involves four criteria: Credibility, transferability, dependability and confirmability. I will discuss each in the following paragraphs.

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Credibility depends on the richness of the information gathered and on the analytical abilities of the researcher (Patton, 1990). It can be enhanced through triangulation of data. Patton (2002) maintains that the goal of qualitative data collection is to find "different types of data to provide cross-data validity checks" (p. 248). Through the use of multiple sources of data, I was able to triangulate the findings to test for consistency within the results. Having multiple data sources also provided nuances among the data which contributed to rich, detailed description and understanding of the data.

Transferability is concerned with the extent to which the findings of the study can be applied to other situations. According to Walker (1980), "It is the reader who has to ask, what is there in this study that I can apply to my own situation, and what clearly does not apply?" (as cited in Merriam, S.B., 2002). I sought broadly applicable perspectives "so that anyone else interested in transferability has a base of information appropriate to the judgment" (Lincoln and Guba, 1985).

There are several ways to show dependability within the results of a study. My study used three methods, some of which overlap with criteria for trustworthiness. First, I sought to be transparent in my research. I provided the basis for selecting participants, a description of each participant related to the research, and the context from which the data were collected (Goetz and LeCompte, 1984). Second, I triangulated data through the use of multiple methods of data collection and analysis. Third, I provided description about how data were collected, how categories were reached and how decisions were made.

Lincoln and Guba (1985) address the "confirmability" of the research. They refer to the degree to which the researcher can demonstrate the neutrality of the research interpretations

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through a "conformability audit." This means providing a trail of raw data, analysis notes, reconstruction and synthesis products, process notes, personal notes, and preliminary developmental information (pp. 320 -321).

## Limitations of the Study

There are three limitations that may have affected the outcomes of this study. First, the focus of this study is one elementary school within an urban context in the Midwest. Because the scope of the study is small, it is difficult to generalize the findings to other school contexts, for example, to a middle school, or a rural school.

Second, the study may reflect investigator bias and bias toward the investigator from participants in the study. While I took measures to separate my personal and professional experience related to this study, my former employment with the district as a supervisor within the assessment department and my current role as a school administrator in another district contributed to my knowledge of the context of the study, my impressions of the findings and my conclusions. Moreover, participants in the study were aware of my professional experience and this may have affected their responses to interview questions. Some may have shared more or less information with me than they might have shared had I not had these professional experiences.

Third, the scope of the study limits themes that emerged through the research. For instance, this study acknowledged the participation of an external consultant as a stakeholder in the use of data for decision making. Other stakeholders may include the involvement of parents, voters and businesses. Yet, their use of school data for decision-making is outside the scope of this study. There are additional important themes such as family mobility and technology that

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are too broad, but impact the applicability and implementation of test data in schools. Finally, mandates regarding mainstreaming special education students and those with discipline or behavior issues sap energy (teachers alluded to this) but again are outside the scope of this paper.

## Conclusion

This chapter outlined the methods I followed while conducting this qualitative case study about the structures and strategies stakeholders in one elementary school used data for decision-making. Data gathered through interviews and document collection is presented in the following chapter, Results. A discussion of the implications of the data is in Chapter 5.

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# Chapter 4: Results

This chapter demonstrates how teachers, administrators and a third party consultant used data to provide feedback about academic achievement to their school and school district over a one year period. First, I describe the types of data made available to stakeholders. I conclude by showing how stakeholders engaged with the data.

Results presented in this chapter are based on two types of data: Interviews and documents. As discussed in the previous chapter, data were collected during the researcher's one-on-one interviews with the following stakeholders: 16 teachers from Friendship Elementary School, the school principal, three district supervisors, one curriculum specialist, the superintendent of schools and one external consultant. Second, data were collected from documents such as the Central Unified District Improvement Plan (Appendix C), the school's Teaching and Learning Framework (Appendix F) and the Friendship Elementary School Improvement Plan (Appendix G). These data were used to identify decision-making strategies and support structures used by stakeholders as they processed data about student performance during the 2010-2011 school year. This study sought to understand the participants' use of data by using these four questions as a guide:

1. What are the structures and strategies used for data-driven decision making?
2. What are the principal's roles in the use of data for decision making?
3. What are the teachers' roles in the use of data?
4. How does the consultant use data for decision-making?

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## Participants and Their Context

This section helps contextualize the case study of decision-making strategies and supports. I present an overview of the district's demographics, the district students' performance on state standardized tests and the district improvement plan. Then I provide information about the particular school selected for this study including a brief overview of the school, its students' performance on state standardized tests and the school improvement plan. I will supply a table listing participants as I describe the school site. However, the district level participants will be introduced in the following section, *Overview of the District*, and also included in the table later on.

## Overview of the District

Central Unified School District is the fourth largest school district in a Midwestern US state. The district includes 21 elementary schools, seven middle schools and six high schools. Central Unified employs approximately 1,700 teachers and 110 administrators. The average teacher has 14 years of experience and more than two-thirds of the teachers have a Master's degree or doctorate. The geographic boundaries of the district extend to six communities within a 100-square mile area. The district draws students from urban, rural, and suburban areas.

The district's population of 21,000 students is very diverse in socioeconomic terms. Of the total student population, 46% are Caucasian, 27% are Black, 24% are Hispanic, 2% are Asian, and fewer than 1% are Native American. About 13% of the students use English as a second language. About 60% of Central Unified's students come from families whose incomes are officially classified as below the poverty line and a significantly higher proportion of these students are in elementary schools than in middle schools or high schools. About 17% of the

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students in the district receive special education services. Most schools within the district have substantial diversity within their student populations.

**Superintendent's Guiding Vision**

Superintendent Bob Smith, Ph.D. has overseen Central Unified School District since 2007. Dr. Smith previously served as a professor of education at a major state university and held a superintendent position in another school district. Under his leadership, the primary goal of the Central Unified School District is to ensure that students achieve challenging yearly learning goals in order to graduate from the district prepared for college or a career. This focus on student achievement is operationalized as "The Number One Vision." In Dr. Smith's words, "The Number One Vision" is a vision for equity and excellence for all kids – a vision that says all children no matter what their background, no matter what the poverty or the wealth of these children, all children can learn successfully" (personal interview).

The district's monitoring for student success starts in kindergarten and runs throughout the elementary, middle and high school years. Key measures of success are used to monitor student progress at each grade level. For example, The Number One Vision for 2010-2011 set district growth targets of at least three percentage points for all students and a minimum of six percentage points for students in groups that have been traditionally more challenged, e.g., students with disabling conditions and students from economically poor backgrounds. The scorecard for The Number One Vision is located in Appendix B.

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During an interview, Renee Larson, who is the Director of Standards and Assessment, explained the key benchmarks for learning proficiency at each grade level along the Number One Vision:

> There are various trajectory points that among all the other trajectory points in kids' educational passage were thought to be key ones. So kindergarten is a reading measure. Third grade is reading. Fourth grade is writing. Fifth grade is math. Sixth grade is reading. Eighth grade is writing. Ninth grade is passing algebra with a grade of A or B or enrollment in geometry. Tenth grade is writing and twelfth grade ACT or obtaining a career/tech ed. certification. So those are the main trajectory points. So we monitor data most closely for those trajectory points. And school improvements are most pointed toward those trajectory points, but then you know general reading and math as well.

Smith's Number One Vision includes a strong message to district staff that his focus is on instructional improvement. His plan also communicates that instructional improvements will be measured through the use of data at the district and school levels. This message carries the expectation that the district and schools within the district will target growth through yearly plans for improvement called District and School Improvement Plans.

Renee Larson explained the Number One Vision Scorecard during an interview:

> Since Dr. Smith has been here, we have changed from what used to be a management review report. What we have now is the Number One Scorecard for all of the student achievement and the student engagement data. I disaggregate by the students: White, black, Hispanic, LEP, SwD (students with disabilities), and low SES (socio-economic

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status). So on the various trajectory points on the Number One Vision for the data related to that, we set targets and the targets are for at least three percentage points growth for the other categories that have traditionally been more challenged. So those are our targets and our message to schools is that you will have a reading goal, a math goal minimally and both of those goals will be disaggregated in the same manner as the district scorecard.

**District Improvement Plans**

For 2009-2010, the district failed to meet Annual Yearly Progress (AYP) goals in mathematics. In 2010-2011, it failed to meet AYP goals in both math and reading. These failures occurred as the student population became increasingly culturally diverse and economically poor. Additionally, the district lost $25 million as a result of changes in the state financial aid formula. Budget cuts led to programming changes and staff layoffs according to Smith.

As a result of failing to meet AYP goals, the district was identified as a District in Need of Improvement (DIFI). In accordance with the federal No Child Left Behind Act, districts are evaluated annually for achievement levels in reading, mathematics and other academic areas. Districts that fail to meet any of the objectives for two or more consecutive years are designated as DIFI. During an interview with Mr. Nass, the Director of Teaching and Learning, he shared the district developed a comprehensive District Improvement Plan (DIP) to address the identified deficiencies in student achievement in reading and mathematics. A copy of this plan is provided in Appendix C. He said,

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The District Improvement Plan is a three-year plan for implementing the Teaching and Learning Framework across all schools. The Teaching and Learning Framework identified two instructional strategies: Understanding by Design and differentiated instruction.

The research supporting each of these strategies points to increases in student understanding at all grade levels. The district's hope was that providing teachers with a clear direction about lesson planning and differentiated instruction would increase student achievement.

**Overview of the School**

Friendship Elementary School serves approximately 420 students within Central Unified School District; its kindergarteners through fifth graders come from the local neighborhood and surrounding counties. The changing demographics of the student population have mirrored the changing demographics within the wider community. The school serves an increasing number of students from economically challenged households, a number that's now 16.8% higher than the state average. In 2005-2006 the school's population was 61.5% white and 41.5% of students qualified for free or reduced price lunches. In the 2010-2011 school year, the school's population was 53.4% white and 60% qualified for free or reduced price lunches (DPI website, 2011).

Friendship Elementary School is unique within the district in this sense: It has an upward trend in state achievement test scores but a rising population of low-socio-economic status (SES) students. As shown in Appendix D, Friendship Elementary School students traditionally perform well on state standardized tests. Since the first implementation of the state standardized test,

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Friendship's students have consistently met AYP in all tested areas in every grade for all subgroups. The change in student population has not significantly changed the overall academic performance. In fact, achievement scores have risen since 2005-2006. The school's state test scores increased 12.4% in math and 12.3% in reading from 2005 to 2011 for students performing in the proficient or advanced range.

This upward trend in state test scores amidst the changing demographics is not mirrored in other district schools. Central Unified's population of low SES students increased 55.9% between 2005 and 2011. Overall, students scoring in the proficient or advanced range in reading increased their scores 1.7% in 3.3% in math. While this was an upward trend to be sure, it did not approach the rate of improvement seen at Friendship Elementary School.

The Friendship staff was composed of 33 full time employees and 12 part time employees. Eighteen of the employees were core curriculum grade-level teachers. Ten of the teachers had experience teaching in special education, Title I, or alternative education. Other school personnel included six specialists in instruction, four special education teachers, one school psychologist, one school social worker, a Title I teacher, an English as a Second Language teacher, and two educational assistants.

According to Principal Gateway, on average, teachers had 17 years of teaching experience within the district and 75% hold advanced degrees. Charles Gateway had served as Friendship's school principal since 2008. He previously served as an assistant principal for two years at a Central Unified middle school. He taught music for nine years in a suburban school district before pursuing administrative positions.

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**Setting.** This research was conducted at one elementary school within the metropolitan area of a large urban school district. The school was selected based on the tenure of the superintendent, the tenure of the principal and the demonstrated improvement in the school's standardized test scores under their leadership. The first criterion was that the district's superintendent had served a minimum of three consecutive years in the district. In this case, the superintendent's time with Central Unified enabled him to create a vision and provide necessary training to implement that vision in schools throughout the district. The second criterion was the school retained the same principal for a minimum of three consecutive years. Finally, the school's test data demonstrated an upward trend in the state standardized test scores in the areas of reading and math over the same three-year period.

**Participants.** Once the district and school site were selected, participants were identified. My goal was to gain insights into this particular school setting regarding its use of structures and supports for data-driven decisions. I used snowball sampling ( ) to identify study participants using three criteria: all were selected by the principal or other participants, were willing to be involved in the study, and taught in grades 1-5. Initially, I met with the principal who agreed to the snowball sampling method, but strayed from the process by identifying for me the first three participants. He purposefully selected individuals whom he believed would increase my understanding of how school staff members use data to inform decisions (Onwuegbuzie & Leech, 2007), but also who would provide the best snapshot of how data is used at the school. These participants included a classroom teacher, special educator and an educational assistant. These staff members provided the names of additional staff members whom they thought were knowledgeable about the topic and would also like to contribute to the study. These participants included the data team and payday team, two influential groups whose

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work is described later in the chapter. Using this approach, I conducted interviews with four additional teachers. These teachers, in turn, identified other teachers in the building who also contributed knowledge and experience about the topic and were willing to be interviewed. By the end of the second day of interviews, I had spoken with the remaining 10 teachers on the staff with the exception of the kindergarten teachers. Kindergarten was not included in the scope of this study. Later on in the study after I transcribed the first set of data, I went back to the principal to ask additional questions. He suggested I interview two district curriculum specialists, one whose focus is reading and the other whose focus is teaching and learning. They each proposed I meet with additional district employees: the Director of Standards, Assessment and Accountability, and the Title I District Supervisor. The Director of Standards, Assessment and Accountability recommended I speak with the Superintendent of Schools. These interviews provided a range of knowledge and experience related to the research questions. A table listing study participants follows:

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| Pseudonym | Title |
|---|---|
| Dr. Bob Smith | Superintendent |
| Ms. Iris Daniels | Associate Superintendent |
| Renee Larson | Director of Standards, Assessment and Accountability |
| Kurt Nass | Director of Teaching and Learning |
| June Erickson | Curriculum Specialist: Reading |
| Matt Barber | Title 1 District Supervisor |
| Charles Gateway | School Principal |
| Dr. Dan Skepansky | External Consultant, Leadership Coach |
| Michelle Lemberg | Educational Assistant |
| Sue Blenker | Grade 1 Teacher |
| Macy Green | Grade 1 Teacher |
| Lucy Miller | Grade 1 Teacher |
| Mya Brown | Grade 2 Teacher |
| Skylar Fox | Grade 2 Teacher |
| Gregory Chandler | Grade 2 Teacher |
| Jane D'Acquisto | Grade 3 Teacher |
| Mark Hammer | Grade 3 Teacher |
| Lisa Johnston | Grade 3 Teacher |
| Becky Halloran | Grade 4 Teacher |
| Martin Goldman | Grade 4 Teacher |
| Gina Koehler | Grade 4 Teacher |
| Juan Martinez | Grade 5 Teacher |
| Marilyn Diego | Grade 5 Teacher |
| Sam Ortiz | Special Education Teacher |
| Max Charter | Special Education Teacher |

Table 1: Study Participants

**Decision-Making Strategies and Support Structures**

Of course, decision-making by the principal and others at Friendship School took place within a context of various decision-making strategies being promoted and different supports being provided for their acquisition and implementation. The following sections describe strategies and supports found at the district and school levels. It answers research question #1, "What are the structures and strategies used for data-driven decision making?"

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**Strategies for Decision-making at the District Level**

Strategies promoted at the district level come from the Teaching and Learning Framework (Appendix F). The Teaching and Learning Framework was developed by a team of administrators from Curriculum and Instruction and Special Education. It provided a set of specific staff development activities that focused on instructional improvement so that the district would meet learning expectations set forth in the Number One Vision. The framework integrated elements of *Understanding by Design* (UbD) (Wiggins and McTighe, 2005) and differentiated instruction as outlined in *Integrating Understanding by Design and Differentiated Instruction* (Tomlinson and McTighe, 2006). A definition of each strategy is located in the first chapter.

**Structures and Supports at the District and School Levels**

Below, I identify and discuss structures used and supports employed by the district and principal to facilitate the implementation of the framework among teaching staff for improved student learning. The structures included Understanding by Design and differentiated instruction. Teachers were trained to differentiate instruction through instructional grouping of students, instructional modification of materials and the use of supplementary curricular materials. The supports the District provided included teacher professional development for the uses of UbD and differentiating instruction; coaching, data support and accountability visits.

According to Mr. Nass, a goal for the 2010-2011 academic year was simply to build awareness of these instructional strategies among all principals and instructional staff members. However, Principal Gateway exceeded these expectations. He trained staff members in UbD so that they would begin its implementation during the 2010/11 school year.

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**Understanding by Design.** Wiggins and McTighe suggest in *Understanding by Design* (2005) that teachers should identify "big ideas" and core processes within the content standards. These concepts and processes should be stated as "essential questions" around which teachers can structure teaching and student learning. The knowledge and skills related to the essential questions are taught within a framework of what the students need to know and how they can demonstrate understanding of the key concepts and mastery of skills.

This process was in its infancy at Friendship Elementary School, but results were promising. Principal Gateway invited teachers to practice lesson planning using the UbD format. He provided a broad framework of its steps so that teachers would have enough information to practice, but not so much information that they would become confused. His informal results showed that teachers who used the UbD format did not have students scoring in the minimal range on the WKCE test. Principal Gateway stated,

> We have started talking about UBD. We tell the teacher, "Start with the assessment. Now plan backwards. How are you going to get to the assessment? What is it they are going to need to know? What are the criteria? Have you verbalized or visualized those criteria to the students so that they understand this?" I'm finding it interesting where teachers have done the basic tenets of UbD and I did not get any minimal. I got one or two basic students and the rest were proficient or above.

Standards and Assessment Director Renee Larson concurred with Principal Gateway that the district, like Friendship School, was at the beginning stages of understanding UbD for regular implementation in lesson planning and unit design:

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> We have just the beginning of an instructional process that is shared and used on a regular basis and people are still developing comfort and expertise with that and especially because it is a new process, it is like any new major initiative and it needs care and feeding and the care and feeding has just begun. So there is the content and the process and unfortunately we are weak in both at this time. We are not going to get better at educating kids, I'm afraid, until we get better at those two things.

**Differentiated instruction (DI).** Differentiated instruction (DI) was the second main theme of the district's professional development for teaching and learning. Differentiated instruction takes into account individual learners' needs, strengths and preferences when designing learning activities and assessments. According to Principal Gateway, there was widespread support within the building for DI. One approach to differentiating instruction is to prepare distinct learning activities for small groups of students. Within a lesson, student groups rotate through these activities set up at stations, or centers, throughout the classroom. Principal Gateway described differentiated instruction through centers this way:

> Differentiated instruction goes on a daily basis. It is expected and it is embedded into the reading and the math series through centers activities. Centers alone was not differentiated activity unless we are tailoring the activities the students are doing so we can better meet their needs and even then you have to ask yourself are all students doing all of the same activities or do you have groups of multi-level going on or are you working with groups where you have your lows your mediums, highs going on? The differentiation is happening on a daily basis.

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The use of data to differentiate instruction was apparent from my interviews with participants. Their use of data was widespread and included using data to form instructional groups, to find resource material or to re-teach a lesson. Following are excerpts from the data:

**Instructional grouping.** Jane D'Acquisto used data to deliberately form heterogeneous student groups for partner activities. She said forming heterogeneous groups of students enabled her to assign roles to students so that each child took on responsibility tailored to their strengths or weaknesses depending on the activity:

> When I look at the data I look at the kids needs and then I group them. I put them into groups of 5 kids and I don't put the low kids with the low kids and the high kids with the high kids. It's all mixed in. Beyond that, when we are working in even smaller groups of two or three, I don't look at kids and say, "Well, I've gotta match low to low." I just mix them all over the place.

Mark Hammer agreed that data were useful for identifying heterogeneous student groups. He also used the data to tailor activities for individualized instruction during classroom activities:

> My groups are all mixed. This year, my group overall is closer. The ranges are not near as far so there are a few on the higher end and a little bit on the lower end but I don't have any significantly lower kids or extremely high. So sometimes I pull particular students who are having difficulty in certain areas for centers and we would work on those skills and then disburse them back into the mixed groups.

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**Instructional modification.** Sam Ortiz, like Mr. Hammer, used data to inform instructional decisions. Mr. Ortiz grouped students homogeneously for some center activities so that he could help students practice deficit skill areas:

> I work in an inclusion classroom and we use it sometimes to structure our centers. Looking at the data cards, seeing what most of the students struggled in, either math or reading, and then having that center focus on that for those students. That was helpful to us.

Martin Goldman used data to modify instruction on a daily basis. He reviewed formative assessment data from quizzes before designing lessons so that his instruction addresses areas of confusion through re-teaching or reviewing information:

> I just did a quiz with my kids and then I go through and I can tell who is struggling with what topic by what their score is. And that will determine what I am going to do tomorrow. So re-teaching or moving forward or coaching. Sometimes it tells me I need to repeat a lot of concepts over and over again, especially in math because it is so skilled.

**Supplementary resources.** Lucy Miller found instructional interventions using tools located on the MAP website. These tools provide practice for skills linked to student RIT scores in different skill areas. Websites that correlate instructional resources with RIT scores provided accurate remediation.

> We get the MAP test score. Let's say we have a group of kids who are really struggling and I'll go into the website and they will have suggestions for teaching actually on the website. And I did not know this but now I do you can put the cursor on the child's name

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> and it will show you things to do for improving the lesson. Then I do buddy pairs for centers and how easy is that! Their center activity might be set up to kinda work on that concept or skill. And if it needs to be more concrete, then we will look into Story Town which has ample re-teaching and differentiation stuff. Same with the math. I love this. I think there is more growth.

Gina Koehler allowed students to select from a list of educational software that links RIT scores to appropriate learning activities. This became one station in a series of reading or math centers in her classroom.

> I use a whole list of websites with games on it for reading and math so that when the kids are in centers for reading and math and it is their turn to do computers, they know their RIT scores. They have to play maybe two of the games within their RIT score. It is wonderful because I use the data to drive what they are doing and it becomes automatically differentiated learning. I was thrilled when I found that website.

Sue Blenker also used instructional software linked to RIT scores as a component of her instructional process. She summarized,

> The MAP scores are prescriptive and they show where a child is at since they are broken down by skill. If maybe it is comprehension or maybe computation in math, then we have certain websites. We have a website that we can go to right now. When the kids log on to that, there is one for reading and one for math. They can click whatever skill is low and then enter the range they are at. And there should be leveled appropriate skills

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> and activities for them to practice. And if you want to challenge them you can ask them to go up maybe one or two levels to see if they can perform well there.

One problem associated with using data for differentiation was the demanding curriculum scope and sequence. Some teachers, like Mr. Charter, worried there would not be enough time in the school year to both differentiate the curriculum and also cover the mandatory scope and sequence:

> If there are students that are struggling in a skill that is part of a skill that is being presented, especially in math, teachers will try to find a way to help those students develop those skills: Staying in at recess, giving them some kind of practice. I don't think we really use how students do on the MAP test right now. Maybe in the future we will use them to do something different with instruction, or to emphasize certain things more. But we have to think about the pace of instruction based on what the curriculum is.

However, Skylar Fox approached this problem differently. She retaught the material so that students had the knowledge they needed to build upon:

> I do supplement the curriculum we have been given. I have been teaching for 20 years. So a lot of times, if they are not understanding something, I will go down a level to fill in any gaps they are missing in their knowledge that they need in order to do this. For example, today we did hour and half hour on the clock. But our curriculum does not have this. Our curriculum says this is something they were supposed to learn in first grade. So my curriculum starts with telling time to the nearest five minutes. Our kids

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> don't remember telling time to the hour and half hour so I need to spend the day reviewing that so I can go on to what the curriculum says we need to learn.

Becky Halloran used data in a completely different way. Her students were nearing the end of their elementary school years and so she believed it was important for them to develop responsibility for their own learning. The trade-off for her came at the expense of differentiating the instruction:

> Well, I don't know what you mean by data completely. I keep track of my classes day to day. I am very interested in class averages. I teach my classes early in the year what class average is. We just put it right on the board as a goal and a motivator. When I hand back papers I will say, 'You guys who are above the class average, great job, keep going. And for those of you who are below, you need to work harder, you need to increase your understanding somehow.' So it is pretty much on them. Independence is what we are after here. Independent learners.

**Supports for Decision-making at the District Level**

During my interview with Associate Superintendent Daniels, she explained that building awareness for the Instructional Process was happening with the building administrative team as well. During the first semester of the school year, principals and district office staff studied Tomlinson and McTighe's book entitled *Integrating Understanding by Design and Differentiated Instruction* (2006). Various activities and materials were used to foster an awareness of the framework and the use of a common language for discussing it. For example, principals completed the Teaching for Understanding Framework to help them understand how to identify the desired results, assessment evidence and learning plan for a topic. During district

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meetings in the second half of the school year, district staff supported school principals to help them accomplish these goals from the Teaching and Learning Framework at the building level:

- Present and discuss with staff Tomlinson and McTighe's *Exemplary Design for Learning*,
- Introduce the Teaching and Learning Framework, and
- Provide ongoing opportunities for staff to observe model classrooms where differentiated instruction and teaching for understanding are in action.

These supports took the form of trainings, coaching, data support and accountability visits.

**Trainings.** Principals and staff volunteers were given an opportunity to attend trainings through the Assessment Collaborative (AC) throughout the school year. Each of the eight trainings focused on a different aspect of Understanding by Design and Differentiated instruction. Each training session included a trainer-led discussion about the history, application and results of using each approach. Participants were also invited to design unit and lesson plans using UbD and DI templates. In Central Unified, Ms. Daniels added the expectation that participants would train teachers at their home schools during subsequent professional development times so that awareness and application of the knowledge would spread throughout the participating buildings.

Principal Gateway gave this overview of what the trainings helped to accomplish:

> My data team showed them how to read and utilize their data. A lot of people say "You have the data in front of you," and that is great, but if you don't know what to do with it, it is worthless. We've taken the time to show them what to do with it and then to say this is how you make an informed decision about making your lessons based on that.

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Principals also had access to District Teaching and Learning Coordinators for professional development in the areas of technology, math and reading. The roles of the coordinators varied but usually involved providing professional development as needed throughout the district. There were a number of different ways this professional development was accessed. First, one of the coordinators provided training to all principals during a monthly Principal's Meeting. Second, interested principals could contact the Teaching and Learning Coordinator to arrange for a similar training at the building level. Third, teachers could directly contact the coordinator to request training at the school or within their department or grade level. Fourth, a District supervisor could send a coordinator to a school for targeted assistance in a demonstrated area of need. This might occur after a SIP review.

**Coaching.** Principals were given an opportunity to receive a school improvement coach from the Leadership Academy (LA) of a major state university. Sixteen coaches were placed at schools during the 2009-2010 school year and continued on for the 2010-2011 school year, but did not receive a contract beyond the 2011 school year. Each coach brought a different approach to school improvement and was randomly assigned to a principal who volunteered for their service.

The principal of Friendship School was one of the Central Unified volunteers who received a leadership coach. The coach, Dr. Skepansky, provided a framework for professional development that related to needs within Friendship Elementary. His framework for understanding professional development is rooted in the National School Reform Faculty (NSF) where he has served as a consultant since 1995. Prior to this, he served as a middle and high school principal for a Coalition School in upstate New York for the majority of his career. His

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bachelor's degree is in religious education along with minors in education as well as zoology and botany. That led to a NSF fellowship for a master's degree followed by a Ph.D. to become a teacher educator.

Principal Gateway enthusiastically received the support from his leadership coach because he brought many new ideas and initiatives to the school. For instance, Principal Gateway said,

> Our grade level meetings this year with our coaching has made a difference because we took very formative data that the teachers brought to us based off of their observations and then we started having discussions about that. And they were like, "Well, we do this already." Whereas I know they do not do it often enough. And we've started some really good discussions particularly with student writing. And I think that is one of the reasons we are seeing some real improvements in the students' ability to write. I think it has to do with how we have discussions about how we teach writing at this school.

Principal Gateway shared a different understanding about the value of having external support for professional development. He supported the use of building staff whenever possible for professional development saying, "I'm a big preacher that you should not look outside your own school for your own professional development and I like to keep it from within. Like if you can't do it for yourself, why do you think someone outside of your building can meet your needs when you are not able to think about what you need yourself?" This statement could be at odds with his support for the role of external consultant within his building. However, it could also demonstrate the degree to which Principal Gateway embraced the external consultant into his

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staff. The consultant became fully integrated as a member of the leadership team and was considered part of the staff.

**Data support.** Principals had access to data reports through Central Unified's computer database. Reports available included the results of any district test a given student had taken while with the district as well as any information that was sent from the student's previous school district(s), if applicable. State test results, MAP test scores, district writing assessments, Naglieri results and report card results are examples of data housed within this system. Reports were easily accessible via the Assessment tab in each student's profile. Additionally, the Department of Standards, Assessment and Accountability generated customized reports upon request. For instance, principals could see grade level scores by building or cohort group performance over time. The Department's staff members were available to help principals understand and interpret the data. Principals could also request that the staff members provide support and training to school staff.

**Accountability visits.** Accountability visits involved the Associate Superintendent, the district student achievement specialist, the special education coordinator and the pupil services coordinator. Associate Superintendent Daniels said these individuals visited schools four times during the 2010/11 school year. The goal of their visits was to assess and support the principal in monitoring and achieving his school's improvement goals. At each meeting the principal was asked to provide a summary of progress toward meeting SIP goals in literacy, math and instruction. The principal communicated any needs in the area of instruction or pupil services to the supervisors during these meetings and help was provided in the form of professional development services in the requested areas (personal interview).

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Principal Gateway had a different experience with the accountability visits. In fact, he rarely saw the Associate Superintendent, if at all. He attributed his infrequent visits to the academic success of his school,

> The Associate Superintendent is very hands off. I am not expecting that much longer because with the whole SIFI and DIFI situation going on. I think we will see him in the schools quite a bit more. With that being said, because we are not one of the SIFI's and in fact are one of the success stories, I think they are going to lay off. Plus, I think they would know I would tell them, "No, no, no. Don't tell me what I need to do. I know what I need to do and I'm doing it based off of that." So I don't see that happening. I do know that discussions with other principals have gone in other directions in regards to when their data was not doing what it needed to do because obviously they were not doing something they needed to do right at the school.

**Strategies for Decision-making at the School Level**

A formal goal-setting process linked school improvement efforts with district goals related to improved performance on state standardized tests. The goal-setting process involved developing a School Improvement Plan during a data retreat. A copy of this plan is located in Appendix G. Educators who volunteered to participate on the data retreat team met with Kurt Nass, Director of Instruction, and Renee Larson, Director of Standards and Assessment, during the summer of 2010 and shared their work with building level staff during a September in-service. Underlying the goal-setting process was the idea that setting goals motivates teachers' actions and links classroom actions to district objectives. These are largely tied to state and thus federal goals.

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**Data retreat.** Renee Larson led the professional development session. She outlined the professional development done at retreats by consultant Sue Nelson:

> I asked Sue Nelson to come in to do training for principals and we have had a Leadership Academy for 3 days. Everybody has come in and they have data teams and they bring their data team and that is what it is about, working on the school improvement plan. They need to describe in the school improvement plan when they are going to meet during the year, how often, what days, so people are using institute day and early release days. Most of the early release professional development now is around data teams and staffs needing to discuss a school improvement plan.

Principal Gateway took a different approach to the traditional 'sit and get' data retreat. He said,

> The school improvement plans were started my first year as principal. Every year we have used more and more and more to the point of last summer instead of having a data retreat we (Friendship Elementary School) did not because we got together between 8 and 10 hours and put our plans together. And instead of having people talk at us and having a more conference or workshop aspect, it was more take your time, write the plan the way you feel it should be written, look at the data along the way. For us, going to this retreat and hearing a presentation that may or may not meet our needs is not doing anything for me whatsoever. Whereas in this aspect, I can get down to the nitty gritty.

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**School improvement plan.** Central Unified had set the goal of all students showing improved achievement with special emphasis placed on closing achievement gaps measured by The Number One Vision. Specifically, all students would achieve at least a 3% gain. Minority, low socio-economic students and students with disabilities would achieve a 6% gain in both reading and math by June, 2011. Success was to be measured through student performance on the state standardized test, the MAP test or other district assessments and reports. Friendship Elementary's SIP goal was to provide a path toward achieving the district's goal of all schools achieving a minimal 3% gain in student achievement overall and a minimal 6% gain in achievement for minority, low SES and students with disabilities in reading and math by June 2011.

Though he acknowledged the District Improvement Plan targeted a higher rate of growth for traditionally underserved students including minority groups and students from impoverished backgrounds, Principal Gateway shared a different understanding of how he actually implements the SIP:

> At this point in time the school decisions are all means all- what are best instructional practices for everyone. I do not want and my staff has said they do not want to target subgroups. Because to do so means that you are affording one level of education for one group and not for the other. Now I realize that might in and of itself be the definition of differentiation, however, too often the case can become very clear that we are doing this because we have to help our African American males. And it is like, "Oh please." What you are doing for them should be good enough for what you are doing for everybody else.

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> And if it is good enough for everybody else, then why aren't you doing it for everybody else. And we have taken that stand.

Teachers at Friendship Elementary shared how the School Improvement Plan influenced the work they do in their classrooms. Jane D'Acquisto said,

> We have to write a mission statement for our grade level, what we would like them to have accomplished. Every grade does that. And we base it off our school goal. And those come from district goals. So it goes together.

Lucy Miller was more skeptical about the value of the School Improvement Plan for her classroom instruction. She argued,

> We pretty much have the school improvement plan read to us many times at staff meetings. And that is kind of where it went. Mr. Gateway designed the plan, and he read it to us many times, but it never turned into SMART goals, or if it did, it was not communicated to my grade level team.

**School improvement plan review and feedback.** Once the data team designed goals using relevant data, a district committee comprised of area superintendents, the director of curriculum and instruction and the director of special education reviewed and approved the goals.

Director Larson summarized the process saying,

> The principal will meet with their data team and maybe a leadership team. And then together they create their school improvement plan looking at their data, but the point person is the building principal. And then that improvement plan is forwarded to their

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> supervisor. The supervisor reads it along with a team of folks from central office who have met with every school data team and listened to what support they need about their school improvement plan but also offered some critique. So they are getting central office support, conversation, and critique about their school improvement plan.

This process was the same one described concisely by Principal Gateway: "They review it, they get together. They provide feedback and they tell us also how they can provide assistance."

Principal Gateway mistakenly believed the goals were not taken seriously, "The goals are supposed to be evaluative of you, this particular year it was not really, but I know next year if (principals) do not make (their) goals, it will be part of (their) evaluation." Director Larson disagreed. She asserted more strongly the effect of not meeting school improvement goals:

> If a principal does not meet the school improvement goals? Well, there was a considerable amount of change in principalships going into this school year. I think like ten or twelve different sites have different principals. So that is a real statement.

**Leadership Structure at Friendship Elementary**

Gateway identified his leadership style as being "servant leadership" as described by Greenleaf (1977). To explain, he lists three attributes of leadership that he values:

- Exhibiting a consistent personality and consistent behavior toward others,
- Serving the organization beyond daily hours, and
- Using the mission to serve others as the foundation of decisions. (personal interview)

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To realize these attributes, Principal Gateway reported using lateral decision making whenever possible. He said,

> My job is to develop teacher leadership in the building. To do so you must share the leadership and I will ask for teachers' opinion on something. I tell them I am not letting them make the decision, but I want to know how you would handle this when I make the decision and I build a consensus that way. Other times I will say, I can live with whatever your decision is because I think it is a good one.

He implemented several structures for staff to share their opinions. The first was through a district initiative called Pay Day Meetings. Pay Day Meetings happened twice monthly with a core group of building level stakeholders: The school secretary, the building union representative, a speech pathologist, an educational assistant, and a teacher. Principal Gateway explained, "The goal of the Pay Day team is to relay to me any concerns among the staff and then we try to work out a solution. I trust them completely when it comes to sharing information back and forth when it can be shared. We are so comfortable that we even address concerns before they even make it to the Pay Day meeting sometimes."

The second forum was through another district initiative, the data team. This committee consisted of five volunteer teachers who expressed a desire to serve a one-year term on the data team. Principal Gateway used his data team proactively:

> My data team does help me look at data and figure out what do we need to do for the next year here. We will have discussion about what need to be the Professional Learning Committee groups for the coming school year.

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The teacher, Michelle Lemberg, described some of her work:

> Being on the data team, we have used it several times to find out what levels the students are at of course and also the differences between minority groups. We've used that to figure out where the students are falling in categories as far as reading and math. We always get a lot more data than the teachers and so we were able to point out to the teachers, "This is what we found as a data team."

Skylar Fox agreed that the data team collaborated with staff for their input into decision making:

> The data team as a committee worked on the goals for the whole school. But we have feedback. Like I'm not even on the committee and we had feedback and input on professional development days and staff development meetings. We give our input for how the decision is made or what our school goals should be both academic and anything. They had the framework and we gave input and we made changes.

The third forum was through informal teacher leaders. Principal Gateway solicited advice and guidance from seasoned teachers within the building. He said,

> I have in addition to that, seven key teachers in this building whose opinion I really trust. I trust their instructional decisions. I go to them for different things along the way because they will advocate for what they think is best. I don't always agree with what they have to say because there are times when they will think in the eyes of a teacher, but as an administrator you've gotta think through the eyes of an administrator. I trust going

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> to them because I know that when I talk to them they are not going around talking to others about what we have discussed.

During an interview with Principal Gateway, he revealed that he viewed Friendship's teachers as experts and he gave them a great deal of professional autonomy. "The staff is such a hardworking group and they take what they do so personally that they are willing to do the extra to balance each other out. And I think they just hold themselves up to it. I know how valuable it is and how lucky I am to have it at this point in my career." He went on to describe how the staff's professionalism influenced his leadership style,

> When I micromanage, I don't get the ownership from them I need to have. So as a principal, I have learned to let go. I will not tell people how to run their program because I have to trust that they are going to do the right thing.

This leadership style influenced how he used data to lead the staff throughout the school year. He was careful to monitor data on a consistent, regular basis.

> I use data to measure my school's effectiveness, both in the sense are we making adequate yearly progress and are we making progress toward continued growth looking at the sense of are our subgroups, what are we doing in our subgroups, where are our strengths, our areas where we need to make improvement so that we can make appropriate growth across the school.

He used the information from MAP data results, given three times yearly, to offer indirect support to teachers who were not reaching growth targets through grade level meetings. He said, "You bring it in that way and you make it an across the grade level suggestion as something we

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need to look at." However, he did not let the staff know the extent to which he monitored student academic progress. Doing that, he believed, would erode trust and chip away at efficacy.

> I also use data to see how effective my teachers are in the classroom. I do not use it from an evaluative standpoint, but I use it personally. I don't tell them that I am doing that, but it does inform me as to what is going on in the classroom as far as from a growth standpoint. I make sure very much so that when I do my evaluation work that I set that stuff aside. I try not to be real obvious because it will erode not only the teacher's trust in the system but it will become known throughout the school and you have to be careful about that.

Gina Kohler shared that she knew Principal Gateway monitored data and provided support as needed:

> I don't know how closely he monitors. I know he has worked with us in groups setting up our data cards and helping us understand what we need to do. I would imagine he knows, exactly, how our kids have done. I mean he could access that data. Because he has come to us and said, "You know you guys I am really impressed. I am really impressed with what you have done. You have gone from here to here and you know that is fantastic.

Mr. Gateway was quick to add that if there was a circumstance that needed immediate attention, he would address the issue immediately for resolution. Yet, he weighed the impact of direct intervention heavily before making a decision to act. He said,

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> You look at the issue and you decide, is it worth resolving? There are a lot of things you work through until the end of the year, you offer the supports necessary, and then you need to look at where you want to place things next year. You make your decision and you move forward.

**Impact of leadership style on staff.** Mr. Gateway's leadership style was met with mixed results from the teaching staff. Some staff members appreciated the autonomy his leadership style afforded them in the classroom. However, others felt they needed more direct guidance from their principal.

Jane D'Acquisto, for example, mentioned the trust she felt from administration, "I feel that Mr. Gateway just tells us what we need to do and …Go! Get it done. I just really feel that you just do what you need to do. I believe he trusts everybody." Lucy Miller appreciated the flexibility she had to decide how to conduct teaching and learning in her classroom:

> We are told to use the data. I find that the improvement of teaching and learning is left up to the teaching staff. And we can choose whichever or however we want to do that. I personally feel the competence in this building is absolutely staggering. So we just do what we do.

Max Charter and Gina Koehler also mentioned an appreciation for their competency and autonomy in the classroom. Said Charter,

> I don't think anybody is looking over my shoulder to see what I am doing. I get feedback from the teachers I work with and we see how the building is doing when the principal

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> gives updates on the building. But I feel like I'm not worrying about my teaching and maybe that is just because I have been a teacher for so long.

Gina Koehler observed,

> I think in this building Mr. Gateway does not need to provide a structure because we are so intrinsically structured. This is a pretty seasoned staff, you know, and we are pretty internally motivated, I think. But we put the pressure on ourselves.

Friendship School was led by a principal who embodied a servant leadership style. Teachers by and large had nearly two decades of classroom experience and advanced degrees in instruction and pedagogy. They have relied on formative data culled from their own observations, experience, and day-to-day classroom work to guide their decisions in the classroom rather than a yearly summative test or a formal growth model assessment. Their belief in their ability to assess and impact student learning formed their sense of teaching efficacy, a belief that they were able to affect positive change in the lives of the students they served. These findings will be presented and discussed in the section titled Teachers' Efficacy in the section that answers the third research question, how do teachers use data for decision making.

However, the trust and autonomy Mr. Gateway afforded the staff was a source of confusion for some participants. All teachers reflected that they received feedback about their teaching practice during formal evaluations, but seldom outside of that. Evaluations happened once every two years for tenured teachers and yearly for probationary teachers.

Sam Ortiz, who was two years into his teaching career, confessed to making instructional decisions without knowing exactly why he was making those decisions. He said the principal

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was not providing hands on support as he grappled with classroom data, "I don't know really how I get feedback about student learning. Just by observing their progress, I guess, their grades. Not so much by the principal, but just by yourself, I guess." Martin Goldman suggests that professional development related to reaching school improvement goals would be beneficial. He said,

> I think that it could be valuable if we are shown through example rather than just, "Do this." I need to see a little bit more professional development. So being shown by example. I think as a teacher I would never just say to my kids, "Here. Here is the assignment. Do this." Show. I would show them how to do it. You know, lead by example rather than just, "Here, do this."

Finally, one seasoned staff member acknowledged lack of feedback from administration and also recognized that poor performance would result in action by the principal. Skylar Fox said,

> I don't really get a lot of feedback through the year on my teaching. But [the principal] is popping in my room all the time. I think if he saw something that he needed to comment on, he is not going to wait until a formal evaluation to do it. And as long as our class averages are kind of consistent with each other and there are not any real red flags, then I haven't had a lot of feedback personally about teaching and instruction.

This assumption was confirmed by Principal Gateway, who maintained,

> They get feedback from me. I will tell them if I think something is not going well. But I don't usually throw that into their evaluation. I usually will tell them. Most of my

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teachers are smart enough to know that if it didn't go well for them, they need to make a change and do it themselves or work with their colleagues.

## Supports for Decision-making at the School Level

As mentioned previously, Principal Gateway expressed a value for shared decision-making with school staff. Still, as building principal he was ultimately responsible for ensuring that his staff implemented the district's goals at the school level. He was charged with implementing various structures mandated by the district's Instructional Process to lend support to teachers' achieving the School Improvement Plan. These included educating teachers about the Understanding by Design process, showing teachers how to use data cards for MAP tests, establishing Professional Learning Communities, providing support from a data team, and coaching. A copy of the Instructional Process document is located in Appendix H.

### Understanding by Design (UbD)

Mr. Gateway advocated for the use of staff development in Understanding by Design (UbD). Mr. Gateway and a team of grade level teachers attended Assessment Consortium (AC) meetings throughout the school year to learn how to apply UbD methods to lessons. During each meeting, participants developed lessons and assessments that reflected the UbD format.

He promoted the use of Understanding by Design as a framework for teachers to use so that instruction matches desired end results for learning. Mr. Gateway believed that "UbD is the platinum standard even though it is incredibly time-consuming." Because it was so time-intensive, Mr. Gateway said he advocated for it to be used in reading and math, the two areas used to measure yearly progress on the state standardized test.

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While this is a district initiative, Director Larson confessed there had not been widespread integration into teacher's lesson planning as she had hoped there would be, though she anticipated with more time and exposure teachers would use the process more and more. She shared,

> In terms of instructional process, we don't have the embryonic stage understanding of using Understanding by Design, although many groups have been to the Assessment Consortium and we continue to take school teams to the Assessment Consortium to understand the Understanding by Design process and we have a framework for teaching and learning that is pretty well structured. I don't think it is institutionalized in the life of the schools and teachers yet.

Skylar Fox shared her understanding of Understanding by Design:

> I just know they always are looking at the state standards when they are writing curriculum guides and we always have been told our textbook is not the curriculum, to look at standards and see what students are supposed to be learning and then teach toward the standards instead of just going through the curriculum.

Gina Koehler pointed to a shift in district expectation from teaching to the test to teaching the curriculum:

> I remember years ago when I started teaching 3rd grade. We had the 3rd grade state reading test. And we taught to what was expected on that test. Not necessarily what the kids needed in reading or what we felt professionally they needed in reading, but we taught to what it was because it was so huge. It was statewide and so much emphasis was

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put on test scores. I'm seeing a switch in that we are teaching more the curriculum and the students are able to do well on the test, versus teaching to the test and let the curriculum then be whatever it is because we are teaching to the test.

**Data cards**

Mr. Gateway learned about data cards during a meeting for school principals. Data cards are tools developed by curriculum specialist Matt Barber for teachers to record student MAP results and easily see changes from term to term. A data card is located in Appendix H. Overall RIT scores as well as goal strand areas are recorded. Mr. Gateway arranged for Mr. Barber to provide the staff with data card training and support in early spring.

When using data cards, teachers can compare a student's performance to norm group performances to determine whether they are performing at, below or above where students typically perform. Teachers can use the cards for instructional groupings, to shape remediation, to inform referrals and so forth. Cards are passed from one grade to the next so that the new teachers have an idea about where students are performing at the start of the fall semester.

Principal Gateway said, "Are you familiar with the data cards and the colors? Average is green, above average is blue and the first stanine below average is yellow and anything below that is red."

Becky Halloran explained how she planned to use data cards. "I think we are moving toward using these data cards because it tracks each kid individually. And people can see going into a particular unit who might have problems and who isn't having problems."

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Mark Hammer appreciates them as a time saving resource for identifying student scores and growth:

> As far as using data, I don't feel like I have enough time to use it as much as I would like to. We are kind of getting into that trend with the data cards and making it more user friendly just to be able to flip a card and say I know we are there. To have those numbers right there will also help us see how we are closing the gap in sub-scores.

Lucy Miller explained the advantage of using data cards:

> We started looking at data three years ago. We've since started to use data cards that Matt Barber came up with and so now we are tasked with putting information on the data card which is going to be helpful in terms of the groupings. But I did the groupings anyway. I can do the groupings with a single charting of the RIT score. Using the data helps me target areas of weakness.

**Identifying specific areas of student strength and weakness.** Three teachers used data cards to identify specific areas of student strength and weakness for individual strand areas of the math or reading portion of the MAP test. Gina Koehler explained that the MAP test is divided into categories within these tested areas. Reading, for example, is divided into phonemic awareness, word analysis, comprehension etc. Knowing a student's area of relative strength and weakness within a subject area offers teachers valuable information about specific areas to address through instruction. Gina Koehler explained,

> In the MAP testing it is divided into subcategories whether it is reading or math. And when I have a student who I notice consistently does not do well on something I can go

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> back to the data card and say, okay, they are high in word analysis but they are having trouble here. Well that makes sense. It is more specific. It helps me define what it is. And that is where the centers come in perfectly.

Sam Ortiz confirmed that the data cards would provide easy access to student data including individual areas of strength and weakness:

> We just started using the data cards so I think those will be a helpful tool to see what part of math, what section of math they are struggling with or are really good in so they can focus on centers or individual instruction. That was helpful to me. They will be really good at giving that visual picture.

Max Charter, a special education teacher, also appreciated the specificity of the data cards. He has come to expect that some students would struggle significantly with learning at the same rate as their peers. He appreciated the data cards because they clearly pointed out areas of relative strength as well as weakness:

> I like the piece we are adding now with the data cards where it is clearly defining what is in the red zone, which is significantly delayed, what is in the yellow, and what is in the green. With my special ed. students, I mean there are obviously students who are all red. But then there are some students who actually have some scores in the green or yellow. And so that can be helpful to say, "Oh, I need to go back and work on that skill and hopefully it will help them next time around." So I do see those data cards as helpful as well as my informal record keeping.

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**Data cards duplicate efforts.** Three participants saw little value instructionally for the data cards themselves because these teachers had already developed their own system for analyzing student data from MAP reports.

Skyler Fox followed along with district expectations that she use the data cards. However, she already was using data to determine who understood material and who was struggling:

> Using data fits with my sense of good teaching, but I don't find that I'm doing any changes after seeing the data. Because I know we were looking at the data cards, you know, the ones we had to fill out. And I already knew that I had to help those students. You know what I mean? You could already tell just from teaching them that those are the students who weren't understanding it.

Jane D'Acquisto agreed that the process of teaching students every day tuned her in to which students understood material and which students struggled. Using data cards did not add new information for her because she had already developed a process to identify strengths and weaknesses:

> You just know by working with the kids who is strong is this and who is not strong in this and so you can base your groups every day on that knowledge. It is hard to find the time to use the data cards. I just use the MAP class report and highlight with a marker who is low here and there and then I go from there.

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Sue Blenker agreed the data cards duplicated work for her because she was so adept at using daily work to understand student progress. Filling out data cards was simply another district mandate:

> I see the child first through daily work and so once I do the MAP test I can go line by line and say I know who is blue and who is green and who is red. And so at first I thought, "Oh great, just another thing." Another thing that will be a buzz word for a year or two and then we'll file it.

**Professional Learning Communities**

The strong district focus on meeting student achievement expectations translated into Professional Learning Community Teams (PLC's) during the 2010-2011 school year at Friendship Elementary. The PLC teams' topics were suggested by teachers and addressed the following building needs:

- Improving student attendance,
- Promoting academic integrity and student and parent engagement,
- Maintaining and improving building climate,
- Addressing achievement gaps and promoting culturally responsive instructional practices,
- Improving student math literacy, and
- Improving student reading literacy.

According to Dr. Skepansky, PLC's were the result of a staff survey that he, Mr. Gateway, and the data team developed. Staff completed the survey at the end of the 2009-2010 school year. They were asked to name issues that they would like to work on during in-service

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days. The survey yielded about a dozen suggestions overall. The data team and Mr. Gateway combined a few of the suggestions and then narrowed the remaining ideas down to about six PLCs. Members of the data leadership team were assigned to facilitate each PLC group (personal interview).

Principal Gateway described how he built consensus for the professional learning communities:

> We put together different topics with staff input into the topics and then we as a data team narrowed the topics down to 6 topics. Then we asked our teachers and staff members which were your top three and which one do you desperately not want to be a part of. And then we were able to get 100% of our staff into their top two choices and I thought that would be a good way to help build ownership of the PLC they were part of.

Ms. Miller was enthusiastic about her role in the Math PLC:

> The PLC's were set up as part of the things we do which was great because there has been a lot of discussion. I'm in the Math PLC. I think it is important to talk as a staff, a building. I think that we have been given quite a bit to do. And with PLC's we are able to suggest some direction in terms of everything that we need to do.

During the first year of the PLC teams, Principal Gateway's goal was to raise awareness of issues related to each team. Another goal was to provide teachers an opportunity to have their ideas heard by administration in a way that would directly impact classroom learning. Several PLC teams far surpassed these goals by creating solutions to address building level issues.

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The work of each team varied according to needs in that area and the use of data may or may not have been part of this work. For example, Principal Gateway said the building climate team used budget funds to give tangible incentives and rewards to students after collecting data about student behavior choices during lunch time as well as before and after school time. On the other hand, the reading and math literacy teams monitored data to gain understanding about student performance in each area.

Principal Gateway shared some of the initiatives that came directly from teacher involvement with PLC's:

> We did a Read Across America day at our school with the Reading PLC. We started to do some adopting of colleges by classroom as part of informing students that they need to be going on to college. Attendance started to beef up our weekly assembly and then celebrating student attendance trying to get the message out to parents.

Gina Koehler added contributions from other PLC's:

> One PLC started Pause for Peace where we honor if a child has done something really good. And they get their picture taken. My group is the Math group, we do have on order some things for grade levels that you could do like a mini math which is a review to keep the kids motivated and helps them remember.

The teams reported back to the staff during staff meetings periodically throughout the school year. "The reporting back was more superficial than we would have liked to have seen," said Dr. Skepansky, "but it did begin to create a climate of reflective practitioners in which we have more to share with each other and more to learn from each other."

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**Data Team and Retreat**

Teacher leadership from the data team was used to guide the development of the School Improvement Plan (SIP). The principal and data team met over the summer to develop the plan using student achievement data from the state test to target instructional areas needing improvement. They also considered district goals. The data team presented the plan to staff during the first school in-service of the academic year. According to Principal Gateway,

> We look at the school improvement plan and we point out areas that we are targeting this year. We make data available to them. We show them how to read and utilize the data. We have taken the time to show them what to do with it in our professional development activities. And then we say this is how you make an informed decision based on what we have seen.

Mr. Charter and Ms. Lemberg explained their roles on the data team:

> Mr. Charter:
>
> I am on the data team. You start looking at differences like if you are considering students in low SES, how are they doing, how are other groups of students doing, what is happening by breakdown in their culture and their different ethnicity. And what is it boys against girls? It is really interesting sometimes looking at that in a numbers sense. And you see patterns that maybe you would not have otherwise seen. So it helps you to see, well, oh, what are we doing about that? And then what should we be doing next? And was it just this one year or was it a pattern over time? So I think it can help you to make building decisions.

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Ms. Lemberg

Well, being on the data team, we have used data several times to find out what levels the students are at of course and also the difference between minority groups. We've used this to figure out where the students are falling in categories as far as reading and math.

Martin Goldman shared a concerned that the data team seemed to have more access to data than others on staff. This concerned him because he wanted to know the relationship between the data and the conclusions drawn by the data team.

I am not on the data team. The data team presents to the rest of the staff. I think the problem with that is that they are in the know, they know what is going on and they present to us and they say you need to go back and do this and you are never sure what is the purpose, how is it going to be helpful, why? This is helpful to know those answers.

The data retreat model used by the district was designed by Sue Nelson, a recognized expert in data use models. School data teams met during the summer to review reading and mathematics test data provided by the district. Team members analyzed the prior year's MAP and state testing data. They looked for trends such as achievement gaps between subgroups, lower performing standards, and data patterns. They developed hypotheses about what they saw reflected in the achievement scores. Then they selected issues to address through the School Improvement Plan.

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**Coaching**

Coaching of the principal and staff was provided by an external consultant, Dr. Skepansky, Dr. Skepansky believed in educating all citizens fairly and described himself as becoming increasingly aware of what needs to be changed in schools regarding students who are low performing and underserved. "NCLB was good for waking up some people for the need for accountability, but that was about all the good that it did. My work is to help move schools away from what my friend Jonathan Kozol calls the 'resegregation of public schools.'" He went on to say,

> It has become crystal clear to me that there are a number of people in our population, minorities, the poor, gays, lesbians, who are underserved and who are being discriminated against. And how can we call ourselves a democratic nation with a democratic school system when we are not educating all of our citizens equally and fairly.

Working toward this end goal, he valued democratic decision-making.

> Jefferson wrote about having an enlightened public who could participate as citizens in a democratic society. That has been a major piece of my thrust – making decisions democratically. I support a school environment where decisions are made very laterally. The decision making is shared equally by all.

He believed that staff members develop more knowledge when they share and work collaboratively and maintained that in working together, teachers and administrators can make real and lasting improvements in their own schools. Thus his goal was to move away from one-

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shot professional development efforts and toward building the staff's internal capacity to move data-driven decision making forward. During my interview with him, he spoke to this belief:

> When I started working in schools, I began to believe that as much as we could, we ought to be doing professional development internally. We did not have to depend on some expensive guru to come in and do a one shot drive by and say now you are blessed with the insight of how to become a teacher or a better school. That may be a little bit glib. I think too much of our professional development has been a one shot or two. And teachers get inspired and excited about that, but it is very hard to sustain. You try something out and maybe it doesn't work. There is nobody there to help you out. And then maybe you lose track of what it was the professional development was about. My view is to do something that is about building internal capacity with what people need.

Dr Skepansky summarized his approach – "relationships, collaboration, democracy, equity, diversity – those are some of the cornerstones of my views" – and went on to make these points:

- Teachers and administrators must help each other turn theories into practice and standards into actual student learning.
- The key to these efforts is the development of a "professional learning community" based on public, collaborative examination of both adult and student work.
- Practitioners need quality time and sustained support to create this community.

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Members of National School Reform Faculty created tools and strategies to use with administrators and faculty to build internal capacity for moving district or school reform initiatives forward and addressing issues of equity and diversity. According to Dr. Skepansky,

> We change people's minds by changing their hearts. We do it very carefully. And I don't change anyone. They change themselves. I really believe that. So I can listen carefully to them and provide a supportive, collaborative environment where it is safe to take risks, where it is safe to try something different, where there will be an absence of guilt, blame and shame which has been too much a part of the professional development in the area of equity and diversity. I can help them by providing the safe environment for them to make changes. To become aware of what the data is, who are students really are, and how we as educators respond.

To build upon Friendship Elementary's internal capacity for using data in decision making, Dr. Skepansky worked alongside Principal Gateway to plan and facilitate staff development days, monthly faculty meetings and grade level team meetings. Tools and strategies he used during his professional development sessions are included in the paragraphs below as I look at participants' use of data.

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## Participants' Use of Data

This section describes how the principal, teachers, and other stakeholders engaged with data about students' academic achievement.

### The Principal's Use of Data

Here I address research question #2, "What are the principal's roles in the use of data for decision making?" During the 2010/11 school year, Mr. Gateway initially used data in three ways: To inform the school improvement plan, to inform instructional leadership, and to design appropriate staff development programs. As I describe below, his role in the use of data changed throughout the school year.

**School improvement plan (SIP).** As school principal, Mr. Gateway was responsible for directing instruction that produces results. Using formative and summative data from MAP and the state standardized test helped him determine SIP goals. To develop a SIP, he asked for staff volunteers to serve on a data team. During the summer of 2010, this team met apart from the district sponsored data retreat for their own data retreat. They spent about 8-10 hours determining the school improvement goals for the upcoming academic year. According to Mr. Gateway, "My data team does help me look at the data from year to year and then figure out what do we need to do for the next year." However, in the next breath, he seemed to contradict himself by saying:

> I essentially had the plan written for my data team. And then I said, "Put this in your speak." Because in the past they took the plan and changed a couple of words and never got back to me so I ended up writing it so I could turn it in on time. But I was like, "Okay, fine. You put what you want but here is what I am going to work towards."

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**Using data to shape teacher meetings.** One of the principal's roles within the district was to serve as the instructional leader of Friendship Elementary. Mr. Gateway used professional development days, early release days and monthly grade level meetings to provide staff with leadership around instructional best practices related to the use of data for decision making. He teamed with Dr. Skepansky and, eventually assigned to him the responsibility of creating opportunities for staff to look at data during these meetings.

According to Dr. Skepansky, "Mr. Gateway increasingly relied on me to develop agendas for staff meetings and early release days, to develop a structure for a data team meeting and then particularly to evolve to working with grade level meetings." There is evidence from teachers to support this claim.

Ms. D'Acquisto and Mr. Hammer described their working relationship with Dr. Skepansky. Mr. Hammer began, "We have grade level meetings once a month this year which we did not have last year. The meetings are with Dr. Skepansky. We also have professional development days with him." Ms. D'Acquisto elaborated by saying, "With Dr. Skepansky, when we have had early release days we have worked with him to look at work and identify what we are looking for. We have worked with Dr. Skepansky quite a bit on what we have done and how we are doing it, what we see, where we can go."

Mr. Hammer added,

> He brought in different examples of different tools that we could use and we could practice with. Actually, how we could grade things and take that back and use it amongst our grade level. So we tried it and then met with him again as a group to talk about what

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> works for each of us and shared what works really well so that we could try out what we each did.

Ms. D'Acquisto mentioned another example of professional development with Dr. Skepansky,

> We were having a lot of struggles on the state test on the math where they had to write and explain. We had a number of kids who just skipped the question because they just did not know what to do so that is something school wide. And so that has been a focus this year with Dr. Skepansky. He worked with us on this because this was a weak spot for our school.

Ms. Halloran also described staff professional development activities led by Dr. Skepansky,

> We broke into groups across grade levels which is very interesting and something we had not done before. We started investigating what we can do across grade levels to help kids achieve in math. Something we came up with was core mathematics vocabulary. We also meet with him every month to talk about the topics and issues for our grade level. And, during one staff development he showed us how to take a bunch of data and look through it. We picked out students who were making gains and we tried to figure out what did we do to make those kids have that kind of success. So we could apply that to other kids, too.

Ms. Blenker went on to describe another staff development activity where staff focused on student writing samples,

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> With Dr. Skepansky we worked on writing expectations. For some in-services what we did was each grade level brought their writing to the next grade level and we looked at what their expectations were. The teachers brought what they thought was a good example, an average example, a poor example. I thought it was valuable. It helped me to think, okay, show what we think a good example is to the teachers then to the kids.

In turning over professional development to Dr. Skepansky, Mr. Gateway's role in the use of data changed to include monitoring student achievement data as I discussed earlier, making data available to teachers and providing teachers' time to look at data. I discuss both of these below.

**Data availability.** Principal Gateway encourages and supports teachers' use of data for decision-making by making the data available to them. He described, "Making the data available to them is in and of itself a big piece." He went on to describe how Dr. Skepansky provided professional development related to the use of data.

> Showing them how to read and utilize the data. A lot of people say you have the data in front of you, but if you don't know what to do with it, it is worthless. Dr. Skepansky has made a difference because we took very formative data that they brought to us based off their observation and then we started having discussions about that.

Juan Martinez and Becky Halloran agreed that Mr. Gateway presented opportunities for staff to look at data, "I would say at certain staff meetings we have had, and in-service days," said Martinez. Added Halloran, "Mr. Gateway provides the data usually at staff meetings. And

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we talk about it, we look at the data and we think about what kind of conclusions we can draw from that."

Marilyn Diego confirmed that Principal Gateway presented data to staff during staff meetings. She pointed out that the data treatment was superficial and she felt ready to analyze and make decisions based on data. She said:

> We have been shown data like at staff meetings. He has shown us how other schools are doing, what are our scores, where we are low and where we are high and what things we need to work on. Maybe where there is a hole in the data like from one grade level to the other where they are losing something. But as far as coming back and working with it and taking it to another level to fix it, he has not really done that too much.

**Time for data.** Teachers expressed a need for time to organize and make sense of the data they needed to use to make achievement goals. Jane D'Acquisto pointed out that teachers have the best intentions to complete all of the paperwork that is asked of them. Sometimes, however, they simply ran out of time:

> Using data is helpful, but a lot of it is time. Putting it together and getting all the information and organizing all of it, understanding all of it and placing it into the curriculum. I don't think it's a matter that people don't want to, it's just time.

Lucy Miller agreed with Ms. D'Acquisto. Time is in short supply for teachers, "I think it is important to talk as a staff, as a building. I think that we have been given quite a bit to do."

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Sam Ortiz shared that he experienced difficulties using data for decision making because sometimes, "just the process of getting the data, taking the time, having access to it" become the primary barriers. He is grateful that Principal Gateway, "gives us a lot of time to work on the data. Like this week he is giving us time to add data to the data cards which really helps."

Martin Goldman, Skylar Fox, and Sue Blenker pointed to the regularly scheduled staff meetings or early release days as a source of time for staff to think about student data. Goldman summarized the process in saying, "When we have staff meetings or early release days are times when we look at data. We look at grade level scores on the WKCE or MAP scores. And then we ask ourselves why."

## Teachers' Use of Data

Research question #3 is "What are the teacher's perceptions in the use of data?" The interview data show that despite the potential that school leaders saw for data to improve instruction, teachers' impressions of formal data systems were mixed. Some shared the district leaders' enthusiasm for the formal systems but others perceived their own observations to be more valid and reliable.

### Teachers Used Mandated Data to Inform Instruction

All of the teachers responded that they used data collected by the school or district to inform their instruction, though they took different approaches for doing so as I describe below. As one teacher, Gina Koehler, explained, "I think you do need to have the [school or district] data and use it as a starting point for instruction. You need to know where the kids are at in order to teach effectively and have them learn everything."

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Teachers took different approaches to using data in the classroom. For instance, the findings demonstrate that teachers use data to prioritize instruction as represented by this statement from Max Charter,

> Being the special education inclusion teacher, there are a lot of different levels that I work at: The pace of the regular education classroom, the individual needs of the students I serve, and how I can bridge the gap between the two. The data helps me to decide where I need to put my priority at that point in time.

Another participant, the fifth-grade teacher Marilyn Diego, agreed that she used data to guide her decisions about pacing and areas for instruction in her regular education classroom,

> For me when I give [MAP] tests, that is data. I always look at the results from my (MAP) test scores. I look at it and I say, okay, who did well, who did not do so well. What do I need to work on, do I need to go back and reteach this, or can I move forward, so I am always looking at the data.

Macy Green said she used MAP data. "I use MAP data to group the kids for differentiation. Or I use data for kids that I have questions about, like students that I have called a Student Support Team Meeting for." She went on to describe how she used data to motivate students,

> I always show the students their scores so they know how many points they should go up. I tell them, "I would like you to get up to 185 (RIT score). I like your score a lot, but if you could just go up one or two more points, that would be good." I always give them a target to work for.

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Lisa Johnston explained, “It will help me with my teaching them. It will help me figure out where they are and what I need to do for them. It also helps me do a better job teaching them what they need to know.”

**Teachers Prefer MAP to State Standardized Test**

Teacher support for MAP data as an assessment tool was widespread. All teachers reported using data as part of a larger picture to inform them about the academic progress of their students. By and large, teachers reported using data from the MAP test more than data from the state standardized test. This was primarily because of the timeliness of the test. According to the second grade teacher Skyler Fox, “I felt it (the state test) was given too early for us to teach all the material that had to be taught that was on the test, but the results were given late so it is not really a tool to give us to teach.” Lisa Johnston added, “With the KCE, we test them in November and they have only been in school a month and a half and we start testing them on things for their grade level which they haven’t even learned yet. I think it is cruel.”

The district gives the MAP test to students three times yearly, fall, winter, and spring. It uses results to see whether there is growth from test term to term as called for in the District Improvement Plan and the School Improvement Plan. By contrast, the state test is administered once yearly in early November to students in grades 3-10. Results are delivered to schools in April. As a result, teachers preferred the MAP test data not only for the timeliness of its results but also for its ease of interpretation and relevance to learning targets. Marilyn Diego shared the experience of many participants in saying,

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> I like MAP data more than the state test data because the MAP data is instant and when they come in September not only do I get that number, but I get a breakdown of where they are struggling in terms of their reading or in terms of their math. It helps me target areas of weakness. Where when we take the state test it is in fall and we get the results in April. And there is no breakdown in data, there is no help so I really don't rely on it at all.

Mark Hammer, a third grader teacher, went on to add that he appreciated the ease with which MAP data can be interpreted and understood:

> With MAP what is great is that you can go and get examples of specific types of questions and you can let parents know that as well. I think parents have really liked MAP testing in that they see the target they are hopefully going to reach at the end of the year and it helps them see where their child is headed or should be headed.

**Teachers' use of MAP data.** Teachers primarily use MAP data to identify the learning levels, inform their plans for differentiated instruction or other interventions, and to provide assurance of student growth from one testing period to the next.

***Identifying learning levels.*** Sam Ortiz, a special education teacher, uses the data to help him understand how his class as a whole is performing:

> Just looking at different strands on the MAP score helps me in the classroom. There are different areas and seeing where most of the class is struggling, you know, is it geometry or is it numbers, and then trying to focus more on that as a whole class.

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Teachers explained that the MAP was especially useful for looking at students' performance within broader skill areas. Jane D'Acquisto said, "[W]hen you break that MAP test down and you look at specific areas, I know what areas my kids need to work on. It is a direction. Prior to the MAP test, we did not have all of this specific information."

***Informing differentiated instruction***. As just explained, teachers stated that a main advantage of using MAP data was its laser-like focus on student's current levels of performance on core content areas. Knowing current performance areas helped them make instructional decisions related to differentiating instruction. By differentiating instruction, teachers were able to provide individual students or groups of students with instruction tailored to their levels of mastery. For instance, they might decide to assign reading groups using students with similar RIT levels. Another option is to group students *across* RIT levels so that students with higher scores help their partners learn the material.

Sam Ortiz described differentiated instruction as a strength of his school's teaching staff:

> Differentiating instruction is just part of what we do naturally. It is like, they see those kids who are struggling and they ask, "What can I do to boost them up?" Instead of just the train is going to keep going down the track, it's what can I do to make sure everyone is getting there?

Becky Halloran added that the data helped her know student strengths and weaknesses for instructional purposes. She described "just taking the time to go through a student's data and compare it and see their strengths and weaknesses and then going back and trying to find things for those students to fit their needs."

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Halloran explained how she used RIT scores to form book clubs. "One of the things it freed me up to do was book clubs. And the book clubs were based on the RIT scores so everyone in the book club had the same or about the same RIT score. I could choose a book based on the readability."

Similarly, the educational assistant Michelle Lemberg used RIT scores to help pinpoint materials for students to use in the library.

> It is easier for us to know the levels of a student than to just make a guess. It has helped us know which child needs to be helped… If they come into the library and they know what kind of levels the students are at I can give them websites they would be able to go to.

The fourth grade teacher Gina Koehler used MAP data to help her formulate effective questions for students based on their levels of understanding:

> I use data in the classroom in terms of how I question my kids knowing that each kid is at different levels and knowing that each kid would be answering a little bit differently because maybe some are low average readers and maybe some are above average and so on.

**Data cards shape instruction.** As mentioned previously, Matt Barber developed data cards to help teachers track student performance on MAP tests from term to term. These index cards list the different academic skill sets tested for reading and math. This helps teachers easily see how well a student performed within a specific topic area. For example, the reading test is divided into the skill sets of word recognition/ fluency/ vocabulary, reading comprehension, and

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literary response and analysis. The data cards provide space for teachers to record a student's RIT score in each skill set, allowing them to make comparisons about areas of relative strength and weakness as well as growth from term to term. A data card sample is provided in Appendix H.

Teachers' perceptions about the data cards were positive. Several teachers appreciated the ease with which they could access a student's score when it came time for lesson planning, student grouping, or differentiating instruction. For instance, Lucy Miller said, "It is a very easy system and extremely helpful. You can actually take the cards and group the cards and move the cards around." Special education teacher Sam Ortiz and second grade teacher Skylar Fox concurred. Ortiz noted,

> I think the data cards will be really good to get that visual picture and to have it. The data will be right there. I work in a third grade inclusion classroom and we use it sometimes to structure our centers. Looking at the cards, seeing what most of the students struggled in, either math or reading, and then having that center focus on that for those students.

Fox commented,

> What I like is that it broke it down into areas. A low score in a reading MAP test is one thing. But maybe they did well on most of the subtopics, but maybe they had trouble in just one area like in phonics. So that helped identify what they needed to work on. I knew the student was struggling in reading, and this helped me identify what they needed to work on.

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**Teachers Used Their Own Data to Inform Instruction**

Classroom teachers said they relied heavily on their own classroom assessments and professional expertise to gauge daily progress on district learning targets as leading indicators of student learning. A leading indicator in this context is what data teachers use to provide them with the greatest information about student learning. On the other hand, the MAP and KCE assessments were lagging indicators. Lagging indicators show the extent to which student learning was achieved (Figge, Hahn, Schaltegger, & Wagner, 2002). The MAP test and KCE test simply reflected back to them what they already knew from their own assessments and expertise about the level of student learning. These tests were not the main souce of information about student learning.

Skylar Fox used her own assessments in addition to her professional judgment when she evaluated students.

> I think that the daily classroom and weekly classroom evaluations are better than MAP testing. Using data fits in with my sense of good teaching, but I don't find that I'm doing any changes after seeing the MAP data. I already knew that I needed to help those students. You could already tell just from teaching them that those are the students that weren't understanding it.

She added,

> There is data from regular tests, weekly tests, end of chapter tests which we give the kids and also just what we see when we are teaching- which students know the

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> material and which don't. So it is really just every day looking at children and seeing who is not understanding the material so we can help them.

This was reinforced by another teacher, Juan Martinez, who said,

> We rely so much on our own knowledge of the students from teaching them day after day. We have to use what we see the students doing every single day. I think that is why our scores are going up is because we are looking at our kids every day and we know who needs help and we are helping them.

Another teacher, Martin Goldman, also described teachers' own data as being more useful and meaningful than other data.

> I find my own classroom data more useful. I find my own sorting of data with the test scores, quiz scores, observations -- that is more helpful to me. After all, I am the one who has to implement it. And it has to be something that is meaningful to me, and my observations.

Sue Blenker went even further in support of using classroom performance in lieu of MAP data by saying,

> When the results from the MAP data come back, it is interesting because when I color code and rank and look at them I can pretty much predict how it is going to fall. I already know before I get the results. Once in a while there are a few surprises where I have to step back and say, "Oh that is interesting. I wasn't expecting that and why." But for the most part I know by October where those

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> kids are and I can pretty much predict where they will be on the MAP test. So I use the MAP test to see growth.

This sentiment was shared by Gina Koehler. She understood that data provided an objective measure of student performance, yet she believed that other aspects of the child needed to be considered as well. She said,

> One MAP test score is half an hour of that girl's life in a whole year. And I have her for 6 hours a day every day and so I would like to keep that MAP test score in the back of my mind. But I also would like to share with you her word lists from kindergarten where she was at 25% and now she is at 75% and I want to share her handwriting sample which was completely illegible in October and now you can actually read phonetically what she has written. So how I use data in the classroom is to make sure that I don't find one piece and get very narrow about what that one piece means. I look at the whole child, the whole picture and put it all together. And if there is a score that really surprises me, then I think I want to look into it a little further.

Sue Blenker agreed in saying, "There are so many ways that a child's growth can't be measured. Sometimes testing reduces the child to a lowest common denominator."

However, a preference for personal data does not mean that it's sufficient on its own. Ms. Blenker acknowledged that such data can provide irrefutable evidence of student performance:

> I guess I would be foolish to walk into a student support team meeting and say I feel this child needs to be tested and we need to talk retention. They would look

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at me and ask, "What do you have to show for it?" And I can't say, "Well, it's just a hunch because I see him every day." I need to have concrete hard evidence.

**Teachers' Efficacy**

The data in this section demonstrate teachers' struggle to balance district expectations about the use of data for decision-making with their own sense of teaching efficacy. Interviews reveal teachers had dutifully learned to use data from formative and summative measures such as the state test and MAP assessments to help them understand and target instruction so that the school continues to meet and exceed AYP benchmarks. At the same time, the teachers also recognized that data beyond these formal measures were important to consider, though they struggled to accept the District's preference for MAP and KCE data over their own professional expertise. This section will discuss the role of teacher efficacy in managing sources of data so that students with challenging circumstances were not left behind.

As discussed in the review of the literature, teacher's efficacy belief is a judgment of how well he or she can bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated. Research has identified three types of teacher efficacy: General teacher efficacy, self-efficacy, and collective efficacy. Examples below illustrate that teachers in this study brought together their efficacy beliefs and classroom expertise to guide their data-driven decision making in the classroom.

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**Self-Efficacy**

Self-efficacy beliefs are teachers' evaluation of their own abilities to bring about positive student change. Ms. Halloran described things she and other staff members did to support students' growth toward teacher's high expectations, "We make ourselves available when we don't have to. We don't have after school opportunities, so we use our lunch time to help kids. I give them my phone number at home for them to call when they have questions about homework. We give them extra time and tutoring. So that is just what we do here."

Skylar Fox said that she does not wait for the data to tell her who is learning and who is not because she already knew based on her experience teaching and assessing the students what the results would likely show. She used her knowledge of teaching and curriculum as leading indicators to know when to adjust her teaching strategy to meet students' needs.

> I do supplement a lot of the curriculum that we are given. I have been teaching for 20 years. So a lot of times if they do not understand something I will go down a level to fill in any gaps they are missing in their knowledge that they need in order to do this. I've identified the problems without the data.

She added her belief that she is not the only teacher who takes this approach. She believes, in general, teachers at Friendship School help student learn on a daily basis without consulting MAP data or KCE data:

> I think every teacher here uses what they learn about students to improve their teaching. If students don't understand something, you have to think about whatever you can do to get them to understanding. You know that everyone can learn. We do our best. And I

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> think at our school you are seeing the scores come up because we are looking at our kids every day and we know who needs help and we are helping them.

Teachers' efficacy beliefs also related to their own behavior in the classroom. Macy Green explained, "Many of us are at the point where we could retire, but we choose not to. We are given the freedom to do what we think is best here. We are very open minded about trying what we think is going to make children successful."

Becky Halloran provided insight into how efficacy merges with data use, "The MAP data usually mirrors what we think. And if somebody (a student) really did horribly, then we talk with the kid and ask them what they think went wrong and what we could do differently and we counsel them."

Max Charter also speaks to both efficacy and data use:

> Data adds more information to help me put together a puzzle of each student. I can look to see are they making gains, what do I need to do to move them closer to be fitting in? And it reinforces if I'm moving them in the right direction. But I think that it is only one piece of it because I think my day to day observations on how they are handling things also fits together. I don't weigh it more than something else. I just say here is extra information to help me make a good instructional decision.

**Collective Efficacy**

Collective teacher efficacy is the perception of teachers in a school that the efforts of the faculty as a whole will have a positive effect on students. This group of teachers was willing to do whatever it took to make sure the students in their charge were learning on a daily basis.

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They met the students where they were at, using data as a guide, but also using their own gut instinct based on years of teaching experience.

Becky Halloran pointed out that the teaching staff as a whole did not let outside factors such as parent engagement influence their expectation of student learning. In this way, the teachers were resolute in providing students with the best education they were able to provide so that the students would perform well academically. Halloran described their collective efficacy beliefs:

> But you know in my way of thinking I think it has to do with the fact that we don't take excuses. We are here to learn. We have a very unified staff and we have certain things that we will not tolerate. I think it is very important to have high expectations. We have high expectations for everyone. So we are very businesslike when it comes to the process of learning and I think that has something to do with our success.

Max Charter understood the impact effective teaching had on students' learning not only in the moment but also over time. He maintained the staff works diligently to scaffold instruction so that students have the proper foundation for future learning:

> With this staff at this school, I have a sense that if the students are struggling with something in math, for example, they are going to go back and say, "Okay, let's find another way to approach this and to give a little more practice in this before we go on to the next skill. Because if they don't get this, they will not get the next skill. They see those kids who are struggling and they ask, "What can I do to boost them up?" Instead of, "The train is just going to keep going down the track." It's, "What can I do to make sure that everyone is getting there?"

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Macy Green confided that the collective efficacy of teachers at Friendship School set them apart from teachers at other schools in the district. She shared a compelling example of a student who transferred with significant academic delays, the result of inattention from other district teachers:

> We believe in the same thing at this school and that is children. I have an example. A student transferred here in January from another school in the district. It's the middle of second grade and he can't read, write or do math. And I looked in the folder and he had veteran teachers. Why? Why? Why didn't they help him? Now we are meeting his needs and he is having success. It is because we believe all children can learn and we need to do something about it. That is what makes us as a staff work.

Juan Martinez believed teachers' efficacy became the celebrated culture of Friendship School:

> I would say all of the teachers here hold themselves responsible for improving instruction to meet the learning and assessment goals. I don't think there is a teacher in the building that wouldn't feel responsible for that. At every grade level we communicate very well with each other. It's the culture here.

**Third-Party Consultant's Use of Data**

This section addresses research question #4, "How do other stakeholders use data for decision-making?"

Prior to meeting with staff, Principal Gateway and Dr. Skepansky reviewed formative data including MAP data from the fall, winter and spring terms as well as classroom work samples. These data helped identify ongoing areas of strength and difficulty areas so that professional development programs would be relevant to teachers' needs. Mr. Gateway and the

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consultant also reviewed the state standardized test scores as summative data. The state test results provided them with an overall understanding of student achievement levels at grade levels.

Using these data, Dr. Skepansky developed a rough draft of professional development activities to use during in-service days, faculty meetings and grade level meetings. As mentioned earlier, Principal Gateway relinquished his role in providing staff development to Dr. Skepansky. I discuss each of the activities Dr. Skepansky initiated with staff in the following paragraphs. The general focus of his professional development was on collaborating with teachers to meet expectations identified in the SIP.

**Fall In-service Day**

Dr. Skepansky and the data team selected a topic for the first professional development activity of the academic year. He noted the data team's observation that "constructed response" was an area on the state test in which a majority of students demonstrated difficulty. Students either left the test item blank and received a score of zero or wrote insufficient or incorrect responses that earned low scores. Jane D'Acquisto, a member of the data team, explained:

> We were having a lot of struggles on the state test on the math where they had to write and explain. We had a number of kids who just skipped the question because they just did not know what to do. That is something school wide and so that has been a focus this year with Dr. Skepansky. He worked with us on this because this was a weak spot for our school.

Dr. Skepansky designed an activity to be implemented at the fall in-service. He used three main components of the ATLAS protocol from the National School Reform Faculty to

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guide his discussion with staff. It included having two teachers bring work to the early release meeting to model the process of having colleagues look at student work. Overall, the ATLAS protocol supports the progression of looking at student work, taking the student's perspective, and identifying what actions the teacher might take.

Dr. Skepansky thought looking at student work would create genuine interest and conversation while introducing teachers to the process of learning from the student work. He also expected that they would gain confidence through the experience of working as co-learners or co-generators of useful ideas.

He arranged teachers into cross-grade collaborative teams and assigned each a data team member to serve as facilitator. First, facilitators asked teachers to take turns describing what they saw in the students' work. Dr. Skepansky recommended ground rules to shape the conversations in a way that avoided jumping to evaluations or judgments. For example, he wanted to elicit comments like "I see three paragraphs" instead of "I see a poorly written essay with an attempt to create three paragraphs." Facilitators were trained to prompt teachers with, "What else did you see?" to ensure that the students' work was well-examined.

Second, facilitators asked, "What do you think the student was working on?" Thoughtful responses involved interpreting the student work from the learner's perspective. The teachers who supplied the work samples listened and took notes about these insights.

Finally, the facilitators asked about implications for classroom practice. They asked questions such as, "What steps could the teacher take next with these students?," "What teaching strategies are needed?" and "What else would you like to see in this students work?"

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Dr. Skepansky believed his professional development was beneficial to the teachers as well as to the students. He said, "We may have to do a little work on familiarizing them with constructed response. They may not have experienced that kind of question before and so they leave it blank. So if you familiarize them with how to respond, they will better know when they encounter it on the state test."

**Faculty Meetings**

Dr. Skepansky's goal during faculty meetings was to facilitate a process in which staff would reflect upon and take responsibility for their teaching, consider how they might change it, and then talk about actions taken. He believed that if this process was followed, AYP goals would be met. "We don't have to totally teach to the test if we are helping more students become more successful in learning how they learn."

He communicated to staff his expectation that some of their strategies would not yield desired results. That would be OK. There would be no judgment or criticism involved in the process; striving to improve was better that stagnating. He said, "If we are creating a climate where I can learn from my failures, if we don't take risks or try something different, we are just going to keep spinning the wheels, staying where we are and we will get the same old results. It is about creating a climate of trust and collegiality."

The staff asked Dr. Skepansky to continue professional development work on constructed response answers on the state standardized test. To facilitate a staff meeting on writing constructed response answers, he asked each teacher to bring an assignment and samples of student work to the faculty meeting. Essentially, teachers examined students' constructed

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responses by grade level. They discussed why students may have responded to the task in the way that they did. Finally, they looked at where the students became confused and how a teacher could modify instruction for improved results.

This staff meeting resulted in improved communication among staff about writing expectations. Sue Blenker said,

> With Dr. Skepansky we worked on writing expectations. A grade level brought their writing to the next grade level and we looked at what their expectations were. The teachers brought what they thought was a good example, an average example and a poor example. I liked it. I thought it was valuable.

**Monthly Grade Level Meetings**

The final forum in which Dr. Skepansky provided professional development to staff was the monthly grade level meetings. During my interview with him, he said he decided to meet with grade levels after hearing teacher concerns that some of their issues were not being addressed during the other professional development times. He met with staff monthly to address specific students' academic needs. Together they used data from the MAP and the state standardized test to tailor their agendas.

The meetings followed a protocol that guided teachers toward a better understanding of their work and student achievement. The protocol included asking these questions:

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- What important tasks can't my students accomplish?
- Why can't my students accomplish these tasks?
- What does the student work tell me?
- What evidence do I have of students' understanding or lack of understanding?
- What have I done in the past to address this issue?
- How can we help my students accomplish this task?

Teachers regarded the protocol as unique and effective. Said Macy Green,

> In a meeting with Dr. Skepansky we are going to have to tell what we did to help a student improve by looking at their data, what we saw, and what intervention we did so they could improve. This is the first year that we have had to do that in my 20 years of teaching.

This was confirmed by Mark Hammer, who added,

> We have had different examples of work and what we are looking for and with Dr. Skepansky we have worked with him quite a bit on what we have done and how we are doing it, what we see, where we can go.

Dr. Skepansky said that staff members were able to exchange substantive ideas about their own teaching as opposed to having conversations that did not reflect as much depth about their teaching practice. "I was trying to create more opportunities for them to share more teaching things of substance. We don't need to bring in the world expert on long division. Some of us right here might be able to look at it more successfully."

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This effort paid off. Gina Kohler said,

> Division and division with remainders has nearly driven us nuts this year. And one day I was in the hallway and I asked for help. And this person gave me a multiplication chart. And so I tried it and it worked with my low kids. So now we say, what do you do for this? Do you have a good idea?

**Consultancy Dilemmas**

Additionally, grade level groups sometimes met with Dr. Skepansky for a "consultancy dilemma." A consultancy dilemma provided teachers an opportunity to share a problem or concern they were having related to their classroom practice. Consultancies gave teachers an opportunity to ask for the expertise of the group for experienced-based responses to the dilemma(s). The presenter begins by giving an overview of the dilemma with which s/he is struggling and frames a question for the group to consider. These steps comprised the full protocol.

- The group asks clarifying questions of the presenter.
- The group asks probing question of the presenter. The questions are worded to help the presenter clarify and expand his/her thinking about the dilemma.
- The group talks with one another about the dilemma presented
    - What did we hear?
    - What did we not hear that might be relevant?
    - What assumptions seem to be operating?
    - What questions does the dilemma raise for us?

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- What do we think about the dilemma?
- What might we do or try if faced with a similar dilemma?

The presenter reflects on what s/he heard and on what s/he is not thinking, sharing with the group anything that resonated for him or her during any part of the consultancy.

**Sticky Issues Meeting**

When scheduling would not permit a long meeting, a 15-minute "sticky issues" protocol was followed to let the three grade-level teachers each present an issue. The group asked clarifying questions and suggested possible solutions. Dr. Skepansky said, "Among the people in the group, they will come up with something. It may reaffirm in a new way what you have already been doing; it may be a new idea to try something. This tool is rooted in the belief that we are often our own best resource." He creates a trusting environment and provides the structure to help teachers collaborate and regard one another as resources.

## Conclusion

This chapter presented data about how the principal, teachers, and an external consultant used data to provide feedback about academic achievement at the school and district level. Both the district and school were in compliance with procedures established by NCLB; improvement plans targeted sufficient rates of student academic growth, and professional supports engaged teachers in instructional best practice. While these structures and supports were designed to provide necessary help for schools to align practices to leverage academic outcomes, Friendship School was selective about their actual implementation. Instead of following district expectations, they submitted the requisite plan on paper but focused on structures and supports

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more suited to their unique needs. For instance, through leadership by the external consultant, Dr. Skepansky, they focused on distributing leadership, professional learning communities, and lateral decision-making among staff. With this shared leadership, they built a school climate where teachers listened to one another, trusted their experience and expertise, and learned by taking risks. They relied more on their own experience with student assessments than more formal measures such as MAP and KCE as evidence of student learning which was in contrast to District expectations. However, the disconnect between the district and school did not hinder Friendship's use of data for decision-making, or their student achievement results. On the contrary, teachers moved forward with their understanding and implementation of student achievement data for instructional decisions and both MAP and KCE results met growth targets.

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## Chapter 5: Conclusions, Implications and Suggestions for Future Research

This was a study of one urban elementary school within a large, Midwestern school district. The purpose of the study was to identify the structures and strategies for data use among identified stakeholders including the principal, the teachers and an external consultant. Because the school site experienced an ongoing rise in student standardized test scores amidst an increasingly diverse student population, the study set out to identify how the district and school used data to inform its decisions. The conclusions reveal a formal system of structures and supports for data use at both the district and school levels. However, teachers in this study preferred to use their own data to inform their decisions compared to the data they received from the MAP and KCE tests. This finding has implications at both the district and federal levels as schools struggle to create a meaningful data-driven decision-making framework to meet federal accountability demands. The results of this study may inform inquiry into data-driven decision-making by other districts and schools.

This chapter presents the findings for each of the questions guiding this study and the illustration below (5.7) depticts this visually. Following the presentation of data for each question, a discussion of the findings shapes the conclusions that can be drawn. Then, the chapter describes the implications of these findings for practice. The chapter closes with areas for future research and concluding remarks.

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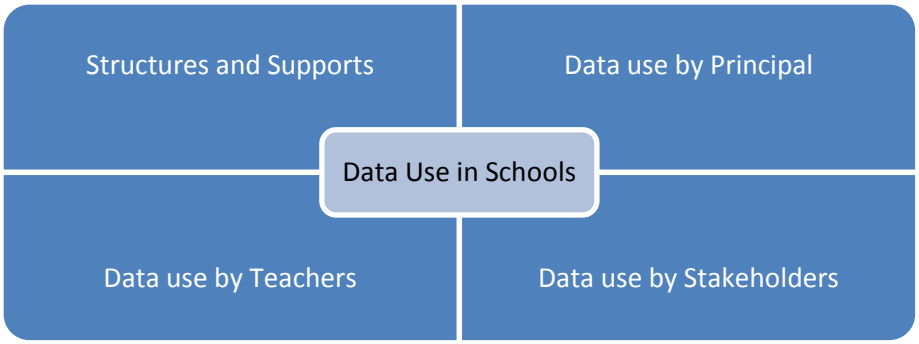


Figure 5.7: Overview of Findings

**Summary of Findings**

The first finding shows two data-driven decision-making models emerged from federal demands for school improvement. One model supports district initiatives and overall academic growth expectations while the second model is specific to the areas the school will improve. Both of these models draw from large-scale achievement measures including MAP and KCE assessments as the primary source of data for decision-making. A key finding is they both overlook classroom based measures largely because these measures are ignored at the federal level.

The second finding is school improvement must come from teachers within the school itself, not from an external mandate or policy decision. The teachers in this study formed a professional learning community to share their professional experiences teaching and using data to guide their instructional decisions. Two patterns of data use by the PLC's emerged. The first pattern reveals teacher's use of classroom data and professional insight to draw their own conclusions about student learning and achievement, oftentimes before test data was available. The second pattern describes how teachers integrated MAP and KCE data into their decision-

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making processes. This was done to comply with district and school expectations and teachers reported formal data measures matched their own conclusions.

The third conclusion is the critical role of an instructional leader in effective school transformation. Distributing the instructional leadership role effectively supported change related to data use for instructional decision making within this school. Principal Gateway turned to Dr. Skepansky to fill the role of instructional leader. Dr. Skepansky modeled trusting relationships within professional learning communities. This helped Friendship School meet their bottom line- improved learning outcomes, while also strengthening teacher's collective efficacy.

The fourth finding shows the relationship between teacher performance and teacher efficacy. This study shows anything that helps teacher efficacy helps data use. Encouraging teacher efficacy supports a data driven instructional system.

**Question 1: What are the Structures and Strategies for Data Use?**

Since NCLB was passed in 2001, educators have faced increased accountability for public school performance as shown in Table 1 (Appendix A). The federal plan is a guiding framework focusing on demanding high academic standards and tightening the links between the standards, curricular instruction and assessments (McGill & Franzen, 2000). The achievement testing movement provided a new tool by which educational problems could be studied systematically in terms of evidence regarding the effects produced in pupils. States responded independently to federal demands by establishing summative assessments given once yearly to students as a measure of academic growth. Unfortunately, untimely results from these point-in-

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time assessments led to what Anderson, et al., (2010) call single loop learning. Districts and schools minimally used the results from these assessments to inform classroom practice.

For student achievement data to be more useful for decision making, districts struggled to reconcile the demands of NCLB accountability policies and systems with traditional school practices and cultures of data use (Newman, et al., 1997; Halverson, et al., 2005). Effective data use today involves understanding the practices and cultures of a school and reshaping them as needed in response to data within the context of high stakes accountability (Halverson, et al., 2005).

A model for systemic data-driven decision-making ideally would organize a coherent set of organizational functions so that student information can be readily accessed and interpreted by stakeholders. This study shows two data-driven decision-making models emerged as a result of federal accountability demands. Behind these different models are differing perspectives about the kind of data that is most useful in driving student achievement results in accountability systems.

In this study, Central Unified School District responded to federal reform efforts by creating and promoting structures and strategies for schools in the use of data for decision making at the school and classroom levels. As illustrated in the following figure, the primary structure was the Number One Vision which established structures and supports to link federal and district expectations for student learning in reading, writing and arithmetic.

To make the Number One Vision a reality, district officials developed the District Improvement Plan (DIP) which identified strategies and supports to help school sites achieve the expected rate of academic growth to meet NCLB expectations. The DIP connected the district's

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internal accountability system with the state's external accountability system, which is aligned with NCLB goals.

The DIP was made actionable through the Teaching and Learning Framework. Two key strategies were presented in this framework to help teachers advance student performance: differentiated instruction and Understanding by Design. The district followed up with four supports to help staff develop this awareness: Training, coaching, data support and accountability visits.

At the school level, structures for decision making included professional learning communities, the Data Team and the School Improvement Plan (SIP). The SIP also identified supports for decision-making at the school level. These supports include Understanding by Design, the use of data cards, and coaching through an outside consultant.

The following figure summarizes the district's Number One Vision:

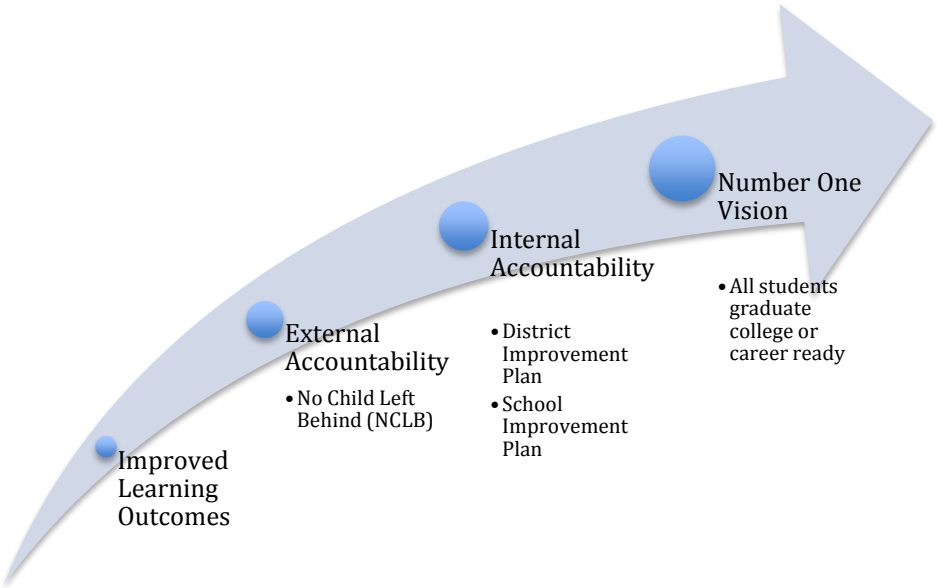


Figure 5.6: Number One Vision

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NCLB fails to provide prescribed structures and supports as districts strive to reach annual accountability goals. This could be seen as both a benefit and a detriment. The lack of structure at the federal level enables capable school districts to exert meaningful autonomy within the federal accountability demands. In this study, the district accountability framework illustrated above merged the federal accountability system with the district's aggregate data for student achievement levels. The resulting district framework was tailored broadly to student achievement and included the supports the district identified to help all schools improve.

On the other hand, in creating the district improvement plan, district officials, hamstrung by pressures to boost achievement scores to minimum proficiency levels, identified only how to help schools struggling to meet AYP expectations. Moreover, the district incorporated only data from formal formative and summative assessments such as MAP and KCE. This was at the expense of teacher's day to day knowledge and expertise about student performance levels. The district failed to differentiate its support to meet the needs of successful schools such as Friendship Elementary. This coupled with loose monitoring through few, if any, accountability visits, provided Principal Gateway room to choose the extent to which he would implement elements of the DIP. Lack of follow-through by district officials gave him silent permission to make these decisions and also placed the school in the default position of being loosely tied to district supports. Without the benefit of district safeguards, the school was vulnerable to failure. Or, one might argue open to developing localized innovative practices.

Principal Gateway was in a unique position within a district facing sanctions under NCLB. He was standing on Friendship School's very strong shoulders of successful student achievement scores that stretched back several years, to the onset of testing under NCLB. This

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afforded him latitude to cultivate localized, innovative practices. Gateway simply pointed to the school's proven track record of success. Principal Gateway alluded to this when he spoke of district monitoring,

> Because we are not one of the SIFI's and in fact are one of the success stories, I think they are going to lay off. Plus, I think they would know I would tell them, "No, no, no. Don't tell me what I need to do. I know what I need to do and I'm doing it based off of that."

Principal Gateway was able to leverage this autonomy to meet the needs of his teachers so that the emerging data driven instructional model shown in the figure below is best suited the needs of his teachers and the culture of the school. The end result was a successful yet unique adaptation of the DIP.

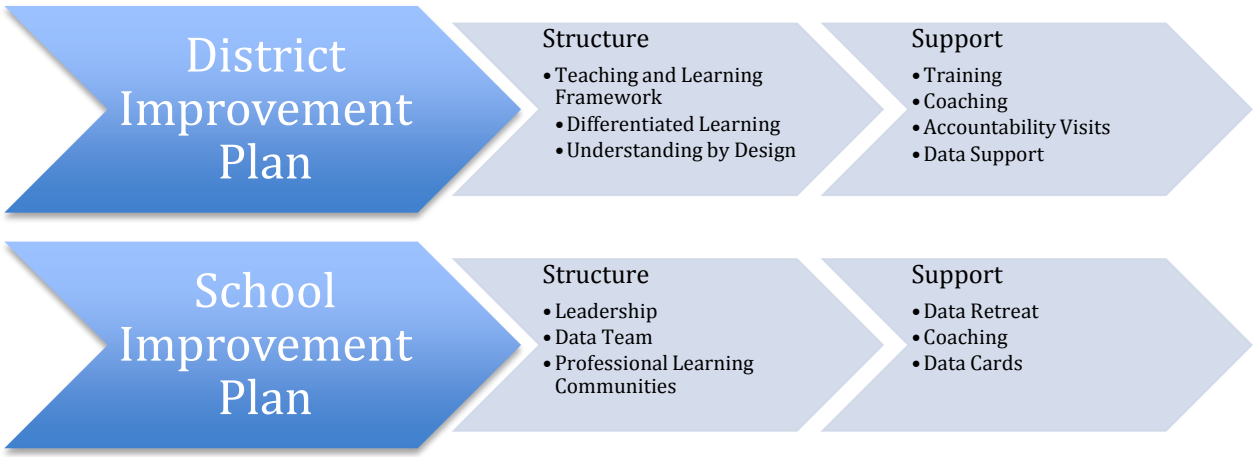


Figure 5.7: District Improvement Plan and School Improvement Plan

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One example involves the Teaching and Learning Framework. Central Unified presented principals with a minimal goal concerning the Teaching and Learning Framework by simply making staff aware that the framework existed. However, Principal Gateway embraced the framework in its entirety. He went beyond basic district requirements to include foci on differentiated instruction implementation in the classroom and backward-mapping lesson planning using multiple data points as part of daily teaching for understanding. He reported strong achievement results from this decision.

Another example is District to School coherence in goal setting: The School Improvement Plan, data retreat model and the role of the school consultant. In each of these examples, Principal Gateway shaped District expectations to meet the needs of Friendship Elementary School. The result was improved student learning and support for the long held school culture of high expectations.

The principal's SIP for Friendship Elementary might be considered more ambitious than the DIP. The DIP targeted a higher rate of growth for traditionally underserved students including minority groups and students from impoverished backgrounds. On paper, Principal Gateway complied with district design and set lower targets than those the school actually was committed to achieving. He identified growth for 3% of white students and 6% of underserved in targeted areas of reading and math on the state assessment. However, during my interview with him, he shared that his building level expectation reached beyond district goals. He and his teachers preferred to not differentiate among subgroups of students by insisting that what was best for the lowest performing group would be best for all students.

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Additionally, the principal broke away from the district by creating his own data retreat so that he could provide his staff with what they needed to write their school plan. He believed the professional development offered by Sue Nelson would duplicate what his staff already knew about using data to formulate goals. His approach allowed him to coach his staff on issues unique to Friendship School.

Finally, the school's pattern of success allowed the principal the latitude and autonomy to forego close district monitoring of DIP implementation. Principal Gateway chose to work with a consultant as he identified targets for educational improvement. And then, he was able to cede power in a way that fit the consultant's skills and his own needs. As mentioned earlier, Principal Gateway delegated the role of instructional leadership to Dr. Skepansky. In taking on this role, Dr. Skepansky became the point person who tied together the knowledge, beliefs, and experiences of the staff so that SIP expectations would translate into classroom practice without excluding the rich data stemming from teachers' knowledge and expertise about the daily learning happening within the classrooms.

## Discussion

This study shows different data-driven decision-making models emerged as a result of federal policy. There were distinct differences between data-driven decision-making models at the federal and local levels. The federal government measured progress toward AYP expectations through summative data obtained once yearly through a standardized test. The district followed this lead by outlining growth measured through standardized means while also providing formative measures through MAP testing throughout the school year to help teachers and school leaders meet federal and district academic achievement expectations. However,

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taking its lead from federal policy mandates, the district excluded data from teachers' own assessments and expertise in its improvement plan. The district expected teachers to follow district expectations for data use in lieu of their own professional expertise.

Without close monitoring by district officials and with the confidence that comes from success, the school chartered its own course toward improved student learning outcomes as their use of data for decision-making evolved from DIP and SIP planning to recognize the validity of their own classroom assessments and professional insight. The DIP was, at times, given a nod by the data team, Principal Gateway, and Dr. Skepansky; but eventually became a notion adhered to only in school improvement planning to meet district requirements, but not to inform classroom decisions. Rather, their assessment and insight helped them charter the course more effectively than what district and federal guidelines mandated.

District officials were likely aware of this insubordination to district expectations, however, they were faced with monitoring the Number One Vision in nearly 31 failing schools with dwindling financial resources. Friendship's past success in meeting academic expectations reduced the district's need for monitoring and support. Teachers at Friendship School confided to me their hope that district officals would take notice of their insubordination because this would lead to closer scruitiny. This would provide teachers a platform to share how they successfully implemented reforms to increase learning outcomes in the classroom. Their hope was restoring the faith of district administrators in the capability of teachers as knowledgeable and trustworthy decision-makers.

Similarly, the SIP over the course of the year grew less and less relevant to teachers. They grew empowered by shared leadership roles and decision-making opportunities resulting

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from distributed leadership practices, lateral decision-making and professional learning communities. Moving away from the formal, bound structures of the SIP and DIP was the natural progression that came when they reclaimed and rediscovered who they were as teachers and who they were becoming as leaders.

The teachers, under the guidance of Dr. Skepansky, developed an informal, living improvement plan, as opposed to a static document. The difference can be seen in the relevance of staff development and coaching compared to the needs of the teachers. For instance, simply knowing what needed to change did not sufficiently motivate teachers to embrace Understanding by Design and differentiated instruction. Instead, it was meaningful conversation with Dr. Skepansky and the efficacy of one another that helped teachers make sense of the data and how best to respond. This included ideas and solutions that were relevant to their school and classroom context. It also included affirmation of teachers' own ability to reasonably assess student learning without strictly using MAP and KCE data. Their ability to merge myriad data points into a data-driven instructional systen paid off at Friendship School. Student assessment results improved during the year in which this study took place, exceeding NCLB and district growth expectations.

To what extent was federal policy useful to practitioners at the local level given the autonomy within the federal accountability demands? This study shows a disconnect between the district and school improvement models even though both were designed to meet federal accountability demands. Even more telling, there was a disconnect between the school improvement plan and teacher's response to the plan. For instance, teachers said they did not rely on assessment data from MAP and KCE because they already knew student achievement levels simply from working with students every day. This demonstrates that federal policy and

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even district policy provided limited value to practitioners at the local level. It underscores the need for local decision makers, particularly teachers, to have a voice in larger policy decisions, namely to reclaim the notion that teachers need a voice in the decision-making process. And, it suggests looming difficulties for districts that will be faced with integrating Common Core Standards and the Balanced Assessment System into daily classroom instruction in the near future. This will be discussed in the Implications section of this paper.

**Question #2: What is the Role of the Principal and the Consultant in the Use of Data for Decision-Making?**

The second question in this study was the role of the principal in the use of data for informed decision-making. Research identifies the actions of the principal have a profound effect on student learning. A shift in the role of principal from building manager to instructional leader offers avenues for the principal to establish learning as a job priority. However, the results from this study show the power of distributed leadership for instructional improvement. For that reason, in this section I have combined questions addressing the roles of principal and consultant in the use of data for decision making.

Historically, principals have used data to identify problems; more elusive is how principals use data to solve problems. Research (Knapp, Copland, & Swinnerton, 2005) shows schools benefit when principals invite others to the decision-making table, particularly when it involves developing a shared vision for a program or support. Principal Gateway distributed the role of data management and problem solving across various actors in the building, including the data team and, to a great extent, Dr. Skepansky, the consultant. Yet, Principal Gateway did not cede his power entirely; rather, he remained apprised of the process while letting others become

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more involved in the work. For example, Principal Gateway acquired data from the state test and MAP assessments and used this information to remain informed of building progress toward SIP and DIP goals. He communicated to staff pertinent test results from both the KCE and MAP assessments so they could include them when they made instructional decisions. He shared decision-making power with the data team to assist and support his writing the SIP plan, and also to reflect and report to staff data results throughout the school year. He further distributed leadership by assigning to Dr. Skepansky the role of using data for instructional leadership. In distributing the role of data manager and problem solver across various stakeholders, Principal Gateway succeeded in engaging the knowledge, skills, and dispositions of many to serve as conduits for sense making related to data use among teachers. He also sent a clear message that he was serious about implementing this change.

**From Consultant to Mentor**

The call for principals to include instructional leadership in their list of job responsibilities is relatively new (Maxwell, 2010; Goldring & Berends, 2009). It makes good sense for a district to engage building leaders in designing clear instructional vision and expectations at their building site. After all, the principal is arguably the most knowledgeable about the variety of factors contributing to student learning within their building. And, the principal is in a position of decision-making authority to enact necessary changes, if needed. In Central Unified School District the need for instructional leadership was clear; student achievement rates were stagnant in the vast majority of district schools at all levels: Elementary, middle and high schools. Despite this compelling reason for skilled instructional leadership at building sites, the district provided neither formal training nor direct, ongoing formalized

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coaching for principals to learn this new role. In this study, the consultant, Dr. Skepansky was was randomly assigned to Friendship school for a limited term. As luck would have it, his primary skills included instructional leadership and managing complex change. It was a chance happening that his skill set matched Friendship's greatest need.

Adult learning theory supports a mentor/mentee relationship for principals who are learning new facets of their complex role. School leaders need ongoing support and coaching from experts, just as teaching staff does (Vitcov & Bloom, 2010). Shoulder to shoulder time with an expert provides the principal an opportunity to directly observe the change process and opportunity for reflection with an expert. This takes place all with limited exposure for the principal to the risk of failure or setbacks.

Principal Gateway shared his role as instructional leader with Dr. Skepansky in part because Gateway believed there would be conflicting interests between his role as an instructional coach and his role as a building supervisor. While this is a reasonable explanation backed by data from the study, there are other explanations that surfaced during the study as well.

Principal Gateway was keely aware of his strengths and limitations as a leader with three years experience as a principal. He recognized the challenges leading complex, messy transformational change with a staff of highly qualified, tenured teachers would pose. To Principal Gateway's credit, his decision to allocate a portion of that responsibility to a highly qualified, seasoned expert was a responsible decision.

The benefit of forming a mentor relationship with Dr. Skepansky was evident in the data. Dr. Skepansky trained Gateway while working with teachers to implement the necessary

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structures and supports for the teacher's emerging data inquiry model. Neither teachers nor the principal complained of setbacks or problems with this approach.

**Friendship School's Data Inquiry Model**

Two distinct processes related to the use of data for decision making emerged in this study. First is the process of acquiring and identifying relevant, timely data. The second is the process of making meaning from the numbers. This study shows that acquiring data and making sense of data are two separate things. Sense making requires ways of seeing data within its context to draw relevant conclusions. While Principal Gateway acquired data, Dr. Skepansky helped Principal Gateway and the staff, once they had the data, to learn how to let it inform their decisions and opinions. The following table (5.2) illustrates how he built staff's capacity for sense making by offering time and sustained support in these ways:

| Theme | Structure or Support |
|---|---|
| Organizing data management | Faculty meetings and data cards |
| Developing analytical capacity | Tools and protocols |
| Focusing on process for planned data use | Monthly meetings, teacher collaboration |
| Strategically applying information and results | PLC's, classroom decision-making |
| Transforming data into knowledge | Data cards |

Table 5.2: Sense Making at School Level

Dr. Skepansky built a data-driven model of inquiry that bridged teachers' use of their own professional insight and expertise about student learning along with traditional assessments,

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reflection, and action so that data were integrated into each phase of the decision-making process. He led them to see that effective data use allows educators to better manage instructional time, provide additional instruction for struggling students, gauge the instructional effectiveness of lessons, and refine instructional methods ultimately for improved learning outcomes.

In Friendship's data inquiry model, assessments included not only teacher insight and expertise, but also classroom assessments, MAP assessments, and, to a lesser extent, state assessments including the ACCESS test for English Language Learners and the state standardized test. Teacher reflection included work done through PLCs, the data team, and collaborative meetings where staff discussed how to best tackle the issues. Action took shape in the classroom as re-teaching, moving on, differentiating instruction, and providing supplementary skills. Monitoring results included developing a system to collect and record data following assessments such as the data cards. This is followed by teachers' reflections when they evaluated the extent to which desired results were achieved.

The school culture accepted this merged use of data and grew in their application of data-driven decision-making to support classroom learning objectives. They began to see the use of several kinds of assessments as part of a meaningful feedback system to inform classroom decisions and school planning. Dr. Skepansky helped them identify key elements to bring together to form an effective base for decision making.

## Discussion

One key feature of this research has been uncovering the work of the teachers, principal, and others in the development and implementation of a data-driven instructional system. Elmore (Wayman, 2005; Murnane, Sharkey & Boudett, 2005) argues that local schools lack the capacity

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to fundamentally change organizational practices. In this study, Principal Gateway learned from Dr. Skepansky who became his mentor over the course of the school year. Dr. Skepansky was the primary leader of the school's efforts to design a data-driven instructional system.

In his mentoring and coaching roles, Dr. Skepansky helped facilitate the formation of a professional learning community with staff in order to turn curriculum and multiple forms of assessment into useful tools for data driven decision making. The relationship Dr. Skepansky created with staffwas in his words, "absent of guilt, blame, and shame, which has so often typified schools." He understood change as a human process built first from a relationship of trust, security and acceptance.

At the beginning of the study, the staff's collective efficacy positioned teachers as knowers and believers that all students could succeed academically. Nevertheless, teachers did not systematically use all data types in their decision-making processes to guide student achievement, nor did they look deeply at the data they used. This is typical of a single-loop learning cycle (Ikemoto & Marsh, 2007). For example, at times they traded data reports to follow their own gut instinct about how best to meet student needs. At other times and rightly so, they chose not to use data because they perceived their own informal data and perceptions about students were more accurate than a formative assessment like the MAP test. Nevertheless, the federal push to employ a more formal data-driven process is not going away. A process to integrate the two was needed. How to go about helping teachers diligently use formative and summative data was clear in the mind of Dr. Skepansky. He maintained, "You can't order people to change. That's not how the brain works." He believed change occurs among other people in communities of practitioners. These professional learning communities make change seem believable, more so than individual teachers working in isolation from one another.

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Dr. Skepansky tied together his understanding of the school context and the way teachers work to conclude individual teachers were skeptical about their ability to change by themselves, but as a group they would create belief. "There is something really powerful about groups and shared experiences," he said. This belief became the heart of Friendship School's change toward using data for decision-making.

By attending to the culture and norms teachers had created around data use, Dr. Skepansky moved the staff from single to double-loop learning by helping them consider the assumptions behind some of their teaching practices including the assmptions behind their beliefs about data use. This included strengthening their own knowledge about student learning stemming from classroom observations and assessments. Teachers did not filter out or deny evidence of learning and achievement that fell outside of the parameters of evidence-based decision-making.

He co-created alongside teachers a data inquiry model that merged their own use of classroom data with MAP and KCE data. The inquiry model over the course of the school year became increasingly integrated into the way the teachers routinely used data for decision making.

The following figure (5.6) illustrates the data inquiry model. In this model, the areas filled in with dots illustrate external accountability systems, while the areas filled in with diagonal lines illustrate internal accountability systems.

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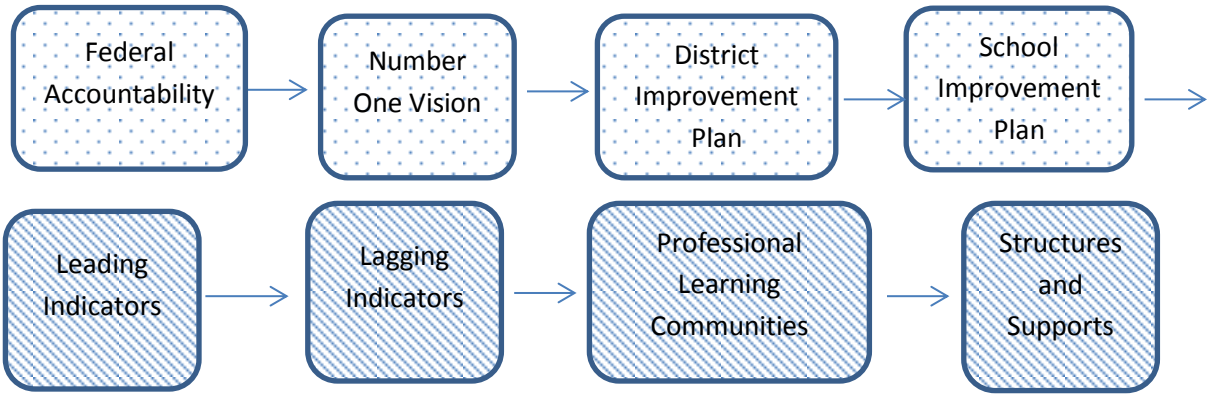


Figure 5.8: Data Inquiry Model

Dr. Skepansky focused on creating professional learning communities around the use of data within the school and the classroom. He significantly reduced the "egg carton" conundrum (Lortie, 1975) by laying the foundation for teachers to share their authentic experiences trying out new strategies. Moreover, Dr. Skepansky raised questions about existing teacher behavior and encouraged teachers to construct ways to integrate the use of student data into classroom practices. This included providing structures such as time for teachers to work with one another as a whole staff and in small groups, tools for teachers to use in reflection about their practice and coaching to help them put all of the pieces together. He was successful in part because of the supports he provided including a climate of respect and risk-taking and the readiness of the staff to move forward with reform efforts.

The instructional changes toward data use were sustainable for two reasons. First, Dr. Skepansky organized changes as small wins. Teachers were given opportunities to talk about their experiences with one another, particularly in front of the group during faculty meetings. Teachers took notice of successes and made changes to their routines that set in motion more small wins. These small wins grew to patterns of successes that convinced teachers even bigger

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achievements were within reach. This fueled deep, systemic changes in the way Friendship School used data for decision making.

Second, Dr. Skepansky started the change process by building a foundation of trust. Trust is important in the school setting because teaching is a practice based largely on the interactions among people. "Trust," Tschannen-Moran writes, "is one's willingness to be vulnerable to another based on the confidence that the other is benevolent, honest, open, reliable, and competent." All five of these traits were present in the professional learning community Dr. Skepansky forged with the principal and teachers. In fact, the data showed that forming a PLC centered on trust helped the school fulful the Number One Vision, to help all students succeed. Through their work in a PLC, teachers expanded their own circles of trust. As relationships grew, more ideas were exchanged and classroom instruction around data use evolved. Trust became woven into their fabric of collective efficacy; their belief that they had the capacity to help students regardless of whichever challenging circumstance manifested. Trust, therefore, impacted Friendship school in their bottom line; it made a difference in student achievement.

**Question #3: What are the Teachers' Roles in the Use of Data for Decision-Making?**

Humble beginnings can lead to great innovations. Teachers in this study constructed data-informed instructional system that was meaningful to their daily teaching practice. The result of its implementation was measureable improved student performance, which, in turn, both complemented and motivated teachers to continue trying out new ways to integrate data into their instructional design. As teachers found success using the data driven instructional system, the positive results contributed to and supported their "can do" belief system. We can conclude from this study that nurturing teacher efficacy strengthens the development and implementation

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of a data driven instructional system in three ways: 1) Belief in their own ability to reach all learners, 2) belief in the staff's ability to reach all learners, and 3) belief in accountability as a supportive mechanism.

The systematic delivery and monitoring of instruction and data enhanced teachers' belief in their own ability to reach all learners. Dialogue with one another at staff meetings and grade level meetings supported the group's belief in their ability to provide a high standard of learning for students. Held up by this certainty in belief, teachers' evaluated formative student achievement results by answering three questions: How am I doing? How are we doing? And, how are they doing? The answers to these questions fueled their data-informed decisions.

Through work with Dr. Skepansky and the data team, teachers developed a web of supports and strategies to help struggling learners: Classroom interventions, instruction from learning specialists, dialogue with colleagues, and stop-gap measures to ensure adequate student care and overall well-being. Teachers routinely checked and rechecked student data after interventions were put into place to discern the effect of their interventions on student learning. At each juncture, teachers were affirmed by positive student learning outcomes measured by data, or, if growth was not immediately evident, by the knowledge that the school would offer appropriate, customized learning so that measureable growth would take place.

Second, performance improvement contributed to the development of teacher efficacy among the staff. As outlined in the DIP and SIP, teachers in this study implemented two new approaches to instruction: Differentiated instruction and Understanding by Design. They also tried out data cards as a way to track student performance on MAP tests. Teachers relied on the support of their professional learning community and the data team to help them integrate these

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new approaches into daily classroom routines. Growth shown by multiple data points affirmed their efforts. Moreover, teachers experienced success in the classroom when they were able to provide students with meaningful work at or just above their instructional level. Teachers were directly able to correlate student success with their own efforts to develop rigorous lessons and relevant instruction using UbD and differentiated instruction.

Third, accountability further assists with the development of efficacy. The two internal accountability frameworks, the SIP and DIP, established the expectation for student achievement so that the school and district would meet NCLB external accountability demands. These clear performance expectations strengthened the relationship between schooling, teaching and learning (Meyer & Rowan, 1975; Weick, 1976) in three ways. First, teachers linked internal and external accountability systems by engaging in crucial conversations about the use of student data to inform classroom instruction. Second, they examined assumptions about student learning and effective instruction. Third, they grew in community with one another, reducing teacher isolation, as they shared feedback, instructional strategies, and relevant lesson ideas to improve student learning outcomes. Accountability sparked a necessary process for meeting the desired expectations of the internal and external accountability systems. Along the way, teachers grew in their understanding of teaching and learning.

## Discussion

Encouraging teacher efficacy supports lasting changes in school structures and supports for data-driven decision making. The challenge for Friendship school was to transform the sense of isolation, the “egg carton” dilemma, into connectedness and caring for the whole. While the DIP and SIP outlined what needed to happen, these two plans also organized school

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improvement into silos. Each piece of the plan identified a purpose, but failed to identify a coherent framework. Dr. Skepansky recognized the primary work to move the school forward was to overcome parallel efforts more than it was to comply with NCLB and district growth targets. Merging structures and supports into a coherent data-driven decision-making system would move the school forward toward continued professional growth, and also support achievement scores.

In this study, Dr. Skepansky served as a conduit between teachers and an improved instructional system that used data for decision making. Dr. Skepansky identified that structures and supports within the DIP and SIP engaged teacher efficacy by shifting responsibility for student learning toward teachers. Teachers were the most important resource within the accountability framework. Therefore, Dr. Skepanksy empowered teachers to realize that changing the system would happen as a result of their efforts in the classroom. In professional learning communities, staff developed a common vision for how multiple data points would be used in the classroom. For instance, teachers shared personal experiences and visions of what they wanted a data-driven accountability system to look like. He helped teachers sort through their perspectives about assessment, instruction and curriculum. He gave them process-centered tools and created forums for them to gather and discuss new information. In this way, they shared a growing sense of ownership as they worked with Dr. Skepansky throughout the year to learn approaches for the use of data in decision making.

Systems are capable of producing services, but not care. Staff at Friendship School came together to solve problems for themselves. Teachers discovered their own power to act without

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waiting for district officials or a plan on paper. As a result, students were well served and cared for. Service and care fundamentally changed the learning outcomes for students.

In the following paragraphs, I will present three implications for practice. They focus on: 1) The kind of data that is most useful in driving results, 2) best practices for linking internal and external accountability systems, and 3) the role of an instructional leader. The chapter will close with areas for future research and concluding remarks.

## Implications for Practice

Because NCLB has spurred states, districts and schools to consider data-driven decisions to advance educational outcomes for students, the implications for practice that arise from this study are numerous. In this section, three areas of potential concern for school leaders will be discussed: 1) the kind of data that is most useful in driving results, 2) best practices for linking internal and external accountability systems, and 3) the role of an instructional leader.

### Data for Results

Not all schools were as successful as Friendship Elementary School in transitioning to the systemic use of data for decision making. In the 2012/13 school year, the Department of Education released 34 states from meeting the lofty achievement goals of making all students academically proficient in reading and math by 2014. These waivers have put into play multiple versions of the original NCLB legislation. States that have been granted a waiver need to submit rigorous and comprehensive plans designed to address four main areas: 1) Improve the educational outcomes for all students, 2) close achievement gaps, 3) increase equity, and 4) improve the quality of instruction (U.S. Department of Education, 2013).

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While the majority of states struggled and eventually failed to increase student performance adequately over time, another sea change was taking place, this time in the area of curriculum reform. Beginning in 2013, states will launch the Common Core State Standards. As its name suggests, the Common Core State Standards is a nationwide framework for what students in grades K-12 are expected to know and be able to do. It will replace existing learning standards in most states. For schools including Friendship, it means integrating new curriculum expectations and performance assessment outcomes into existing district and school frameworks. For districts and schools which struggled to align resources to meet NCLB expectations, this will present the same broad challenge. Results from this study demonstrate districts and schools simply knowing *what* needs to change will be insufficient. *How* to go about making necessary changes is what will continue to ail these struggling sites.

In response to the widespread failure of states to meet growth expectations under NCLB and the implementation of the Common Core State Standards, the U.S. Department of Education in collaboration with states nationwide has outlined expectations for the next generation of high quality assessments. One key difference between these new assessments and those developed in response to NCLB is the use of a growth model to measure student performance over a full academic year. The U.S. Department of Education website defines growth as "the change in student achievement for an individual student between two or more points in time," and goes on to list a number of acceptable performance measures beyond the traditional computer adaptive test including end of course tests, performance-based assessments, student learning objectives, and other rigorous measures that are comparable across schools within the same district.

Data from this study support this national transition from a point in time standardized test to a formative, growth based assessment. A formative, growth based test provided timely,

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relevant, and specific information about student learning. With these data, teachers developed instructional responses, which targeted specific areas of relative learning weaknesses. Therefore, students were more likely to show academic gains in areas of relative weakness as a result of interventions stemming from formative, growth based assessments. This is characteristic of rich, double loop learning where teacher response to data reflects a deep understanding of a student and the context for learning. This study shows double loop learning facilitated positive learning outcomes for students.

Results from this study also suggest a growth model assessment contributed to the development and implementation of a data driven decision making framework. In contrast to the value of summative tests given once yearly, the value of a growth model assessment was shown through teachers' detailed understanding of which instructional areas were deficit in each student. Teachers were able to use the data immediately following the assessment to further student growth at instructionally appropriate levels. Teachers continually monitored formative test results and adjusted instruction to achieve ever improving learning outcomes.

This research revealed the possibility that timely and meaningful assessments, coupled with professional development and teacher professional learning communities, could set the process of student achievement in motion by assisting the understanding of how students learn. By contrast, summative assessments provided little help to practitioners. The implications of these findings stretch into the future as states consider implementing a new summative assessment system aligned to Common Core Standards. According to the Smarter Balanced Assessment System's website (2013), the new assessment will provide teachers timely, specific, relevant results about student performance in addition to support structures and tools designed to help students become college or career ready.

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**Best Practices for Linking Internal and External Accountability Systems**

This study shows the best insight for linking internal and external accountability systems is a focus on small-scale structures and supports that happen within schools such as professional learning communities, data teams, and regular and meaningful meetings among staff. Teachers in this study were accountable and committed to ideas they had a hand in creating. This was true because they were most involved in implementing the necessary changes and, as Dr. Skepansky noted, had the collective wisdom to solve the problems they faced.

Results from this study suggest transformational school change must be driven by the stakeholders within the school itself. However, what does a school do when the district, school, and teachers are stuck? A plan written on paper is meaningless without a converter at the school level to help school staff translate the written document into action steps for classroom instruction. In this case, the principal engaged an external consultant to transform the school's approach to data-driven decision-making.

Principal Gateway demonstrated skill in devising plans like the SIP and in planning staff opportunities to engage with student data, for example at the data retreat. However, he was less familiar with the new role of instructional leader and relied on Dr. Skepansky to serve as his mentor. Dr. Skepansky provided Principal Gateway strategies to become an instructional leader. This study suggests that, like teachers, principals require professional development and support in learning how to serve as an instructional leader.

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**Role of Instructional Leader**

In the role of instructional leader, Dr. Skepansky brought together accountability and possibility for school staff. He helped them unscramble the different signals they had been given about school reform efforts, including when and how to make data driven decisions in the classroom. He began by encouraging them to name the existing context without shame or blame. Then, he worked with staff to evolve their way of thinking through conversations that produced new ideas and shared experiences. Lateral decision making supported distributing leadership across many staff members. In shifting the staff's focus away from a single leader as the "knower" and "decider," he moved them toward shared leadership and democratic decision making. Staff turned toward one another to find the answers tocomplex problems. This approach moved teachers past the fragmented structures that had held the school in patterns of past practice, and toward more deliberate decisions, such as the school-wide decision to use of data for decision making.

With teachers at the helm, the instructional leader helped staff choose shared accountability for student learning within the classroom. He supported their willingness to work on three broad questions, 1) How do we begin? 2) What is the process? 3) What strategies will be useful? He helped them become owners and creators of meaningful data driven decision making to support student learning. This shifted their focus from problems toward possibility. The shift in focus was made easier because teachers maintained a strong sense of efficacy. They did not think the students were the problem and that someone else needed to do something different before things would get better. As described earlier in this paper, strong teacher efficacy contributes to data driven decision making.

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This study shows transformative change is possible and lies within a school's grasp. Necessary structures and supports include district and school improvement plans because they provide a blueprint of what needs to take place based on federal accountability demands and researched best practice. However, this study shows more than a plan on paper is needed. Transformational change is most responsive to strategies that engage teachers as co-authors of reform including professional learning communities, teacher efficacy, and community building around improvement efforts. In this way, institutionalized supports and genuine care work hand in hand to transform teaching and learning.

## Reflection

Looking back, the emphasis on yearly summative measures of achievement was an understandable consequence of human nature. People were willing to make massive investments to deal with a threat that had materialized, and were less likely to invest in a problem that had yet to be identified. This well intended goal carried with it unintended consequences, including the exclusion of the classroom teacher as a source of credible evidence about student learning.

In this study, teachers' daily work with students provided timely, accurate and relevant feedback about levels of learning, and in turn, accurately informed instructional decisions. Yet, the district marginalized this knowledge in favor of the federally mandated formal assessment system. This can be seen in the DIP and SIP which exclude teachers' classroom assessments and expertise in favor of MAP and KCE data integration. As a result, there was duplication of effort and layers of testing that yielded the same results. In the meantime, valuable instructional time was lost and the expertise of teachers as data-gatherers was seemingly ignored.

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As an urban principal myself, I understand the pressure districts face to meet federal accountability demands using annual achievement data from summative tests. The quandary is as Elmore (2006) suggests, knowing what data to use and how to best use it. This study shows the data that comes from the classroom captures the same information about student learning, only in an entirely different way. This study suggests classroom data is as valid and reliable as formal assessment data and ought to be considered in a data-driven instructional system.

I feel grateful for this group of teachers who chose to integrate their own knowledge expertise about student achievement levels with district-mandated MAP and KCE assessments. In the end, both stakeholders had a voice in instructional decisions.

## Suggestions for Future Research

In the urban city in which this study took place, an observer cannot look around without seeing serious underemployment, poverty, homelessness, main thoroughfares with empty, deteriorating buildings, and concerns about public safety. Robert Putnam in his book, *Bowling Alone* (2000), found that community health, educational achievement and local economic strength were dependent on the kind of relationships and cohesion that exist among the citizens. Public schools, like Friendship Elementary, mirror the communities of which they are a part. This research begins to highlight aspects of school structures, school culture and federal policy related to data-driven decision-making toward increased learning outcomes. More research is needed to more fully understand the topic and the findings of this study. Areas for future research include the topics listed below.

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1. To substantiate the findings of this study, there is a need for additional research to review the structures and supports for data driven decision-making among stakeholders for a longer period of time, not just one year.

2. Similarly, additional research focusing on the structures and supports for data use among multiple school sites may provide findings that substantiate the findings of this study.

3. Further research using different surveys to collect information related to school structures and supports may provide more detailed information about the structures and supports for data use which would allow for a better understanding about data-driven decision-making.

4. Additional research that targets the action of a professional learning community over a longer period of time may provide information to substantiate how distributing leadership supports student learning outcomes.

5. A case study that focuses on the role of professional learning communities in transforming school culture may also enhance understanding of the impact teachers have on student learning outcomes.

6. A study that explores the benefit of instructional leadership provided by an external expert, such as the consultant in this study, versus the building principal would provide additional clarity to best support the implementation of this important role.

7. Additional cross disciplinary research focused on the early identification and prevention of factors leading to gaps in learning may lessen the reliance on ongoing formal assessment systems as the primary tool for educators to detect learning weaknesses.

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## Concluding Remarks

NCLB was to transform education in three main ways: Ambitious content area standards, high stakes accountability measures, and demanding performance standards. Since its inception, there has been ample data to show school and district performance levels. Despite this awareness, states were unable to construct meaningful frameworks to help districts and eventually schools use student achievement data meaningfully to drive instructional decisions. As a result, student achievement results nationwide did not reach the projected target of all students proficient in reading and math by the year 2014.

Now, in 2013, there is evidence from the number of failing schools that transforming established ways of doing things was neither straightforward nor intuitive at the district or the school level. Data-driven decision-making has suffered from bandwagons that gained momentum before there was a balanced consideration of the range of data and assessments available to schools and the range of viable explanations to inform data-based decisions.

In the instance of using data for decision making, one conclusion is failing districts fell within a knowing and doing gap: Test results were obvious, but how to use the results to enact meaningful reform was less clear. For the majority of schools, good test scores are still elusive, despite the vast amount of money that has conscripted state of the art assessments to measure and improve learning. A concerted effort to find what works in education has been in place for several decades, yet for most students, achievement rates have increased only modestly.

The original hope of teacher-led data-based inquiry is insufficient without adequate structures and supports at the district and school levels to influence and guide teachers. This

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study demonstrates initial planning and supports are identified through planning at the district and school levels. However, real transformation took place when teachers accepted responsibility for improving learning outcomes. With that as their primary goal, the use of data for decision-making became a necessary tool to aide their efforts.

In some ways this study is reminiscent of an age-old problem in education: The hopes of research and policy for school transformation are dashed by the complexity of teaching and learning. However, in this study, we learn the dream does not need to be deferred. Just because the transformation is more ambiguous and complex than initially imagined does not mean it is without value. Ambiguity and complexity are natural elements of transformation; the messiness of change is an affirmation that transformation is emerging. It is an indicator that the right approach will create depth and openings for change.

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**Appendix A**

School Sanctions for No Child Left Behind (NCLB) Accountability

| Consecutive Years of Missing AYP | Sanctions |
|---|---|
| First Year | • Placed on "watch list"<br>• Required to develop improvement plan |
| Second Year | • Listed as "needs improvement" school<br>• Students may attend another school which has met AYP at district expense |
| Third Year | • Listed as "needs improvement" school<br>• Students may attend another school which has met AYP at district expense<br>• Low SES students may receive "supplemental educational services" |
| Fourth Year | • Listed as "needs improvement" school<br>• Students may attend another school which has met AYP at district expense<br>• Low SES students may receive "supplemental educational services"<br>• School must make a "fundamental change" which may include re-staffing or restructuring. |
| Fifth Year | • Listed as "needs improvement" school<br>• Students may attend another school which has met AYP at district expense<br>• Low SES students may receive "supplemental educational services"<br>• School must convert into a charter school, turn management over to a private company or be taken over by the state. |

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**Appendix B: Scorecard for the Number One Vision**

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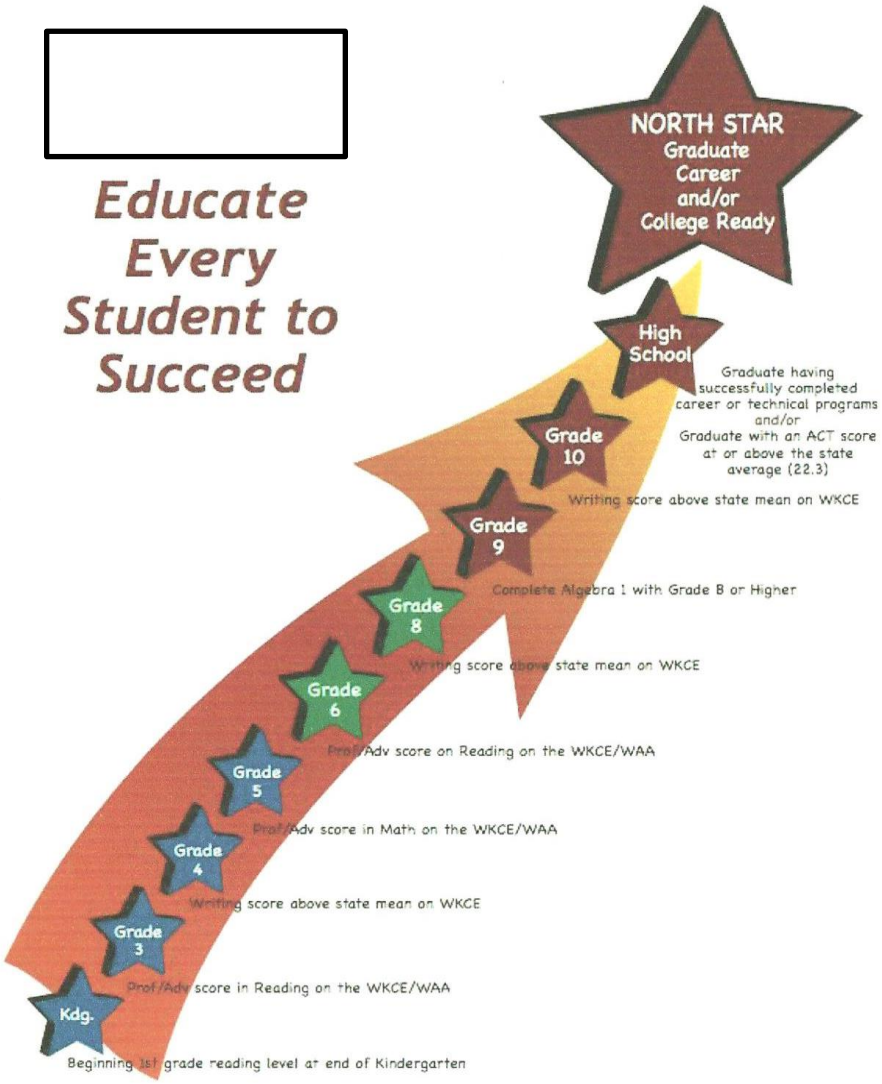




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## MORE INFORMATION ON EACH DATA POINT

| POINT | DESCRIPTION | RATIONALE | DATA PROFILE |
|---|---|---|---|
| | | **READING** | |
| Kindergarten | By the end of Kindergarten, all students should be at the beginning of 1st grade reading level. This point is measured using the NWEA MAP Reading test, which is administered to students in the Spring of their Kindergarten year. The benchmark used to determine if they are at the beginning of 1st grade reading level is the Fall Reading Norm for 1st grade which is an overall RIT score of 160.2. | Indicates students have acquired the pre-reading skills necessary to enter grade 1 without remediation. | The data profile includes the percentage of students who received a Spring Reading RIT score that was at or above the 1st Grade Fall Reading Norm of 160.2. All students who took the Spring MAP test are included in this percentage.<br><br>Other measures for this data point are currently being developed, including those which will incorporate both Kindergarten and 4-year-old Kindergarten teacher input. |
| Grade 3<br>Grade 6 | On the [redacted] tests administered in grades 3 and 6, all students should be either proficient or advanced in Reading. | Grade 3: Indicates students are ready to switch from "learning to read" to "reading to learn". Reading at grade level by the end of 3rd grade is one indicator of high school graduation. If students are not at grade level by 3rd grade, national research indicates they will get further and further behind.<br>Grade 6: Indicates students will not need reading intervention in 7th grade (e.g., Read 180), allowing for a more exploratory middle school experience. | The data profile includes the percentage of students who scored proficient plus the percentage of students who scored advanced on the [redacted] tests. All full academic year (FAY) students are included in this percentage. The targets measured at this point are whether the percent proficient/advanced is greater than or equal to the current Annual Measureable Objectives (AMO) and whether the percent growth over two years is greater than or equal to the state's percent growth. |
| | | **WRITING** | |
| Grade 4<br>Grade 8<br>Grade 10 | On the [redacted] Extended Writing assessment administered in grades 4, 8 and 10, all students should receive a score that is at or above 6. This value was identified based on the [redacted] holistic writing rubric, where a score of 4 out of 6 means "proficient control of the domain" and the [redacted] Conventions rubric, where a score of 2 out of 3 means "proficient control". | Indicates the development of critical thinking skills. Per the National Council of Teachers of English, writing is visible thinking.<br><br>For grade 10, critical thinking skills were identified as a major college readiness skill by university partners. | The data profile includes the percentage of students who received a score that was at or above 6. All full academic year (FAY) students are included in this percentage, even if their essays were unscoreable (e.g., no response, illegible, completed in another language, or invalidated). The target measured at this point is whether the growth over 2 years is greater than or equal to the target growth provided in the [redacted] |
| | | **MATHEMATICS** | |
| Grade 5 | On the [redacted] tests administered in grade 5, all students should be either proficient or advanced in Mathematics. | Indicates students are on track to complete Algebra I by the end of 9th grade. | The data profile includes the percentage of students who scored proficient plus the percentage of students who scored advanced on the [redacted] tests. All full academic year (FAY) students are included in this percentage. The targets measured at this point are whether the percent proficient/advanced is greater than or equal to the current Annual Measureable Objectives (AMO) and whether the percent growth over two years is greater than or equal to the state's percent growth. |
| Grade 9 | In grade 9, all students should receive a grade of B or better in Algebra or be enrolled in Geometry. In order to be enrolled in Geometry in grade 9, students must have received a grade of B or better in Algebra in grade 8. | An indicator of college success per the American Diploma Project is the completion of Algebra II/Trigonometry in high school. Completion of Algebra I in 9th grade prepares students for this sequence. | The data profile includes the percentage of students who received a grade of B or better in algebra or are enrolled in geometry in grade 9. The percentage is determined by dividing the number of students who meet the criteria by the total number of grade 9 students in the school according to the 3rd Friday counts in January. The targets measured at this point are whether the percent of students is greater than or equal to the percent of students at the district level and whether the percent growth is greater than or equal to the district's percent growth. |
| | | **COLLEGE READINESS** | |
| High School: ACT | Upon graduation, students should receive an ACT score that is at or above the state average ACT score. | Indicates college readiness and a decrease in the percentage of students requiring remedial classes in college. | The data profile includes the average ACT score for those students who took the ACT test. All students who took the ACT test in that graduation class are included in the ACT average scores. The targets measured at this point are whether the average is greater than or equal to the state average and whether the percent growth over two years is greater than or equal to the state's percent growth. |
| High School: Certificates | Upon graduation, students should successfully complete at least one career or technical program certification. | Increases career opportunities for graduates. | The data profile includes the percentage of students who successfully completed a career or technical program (i.e., received a certificate) in that graduation class. The percentage is determined by dividing the number of students who meet the criteria by the total number of students in that graduation class who also received a regular diploma. |
| | | **DEFINITIONS** | |
| | **Growth** is calculated by taking the current year's value and subtracting A previous year's value (Current - Previous).<br>**Percent (%) Growth** is calculated by dividing **Growth** by a previous year's value (Growth / Previous). | | |



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## Introduction to the 2010-2011 District Scorecard

**The District Scorecard is aligned to the [redacted] vision and represents reasonable and achievable targets for performance regarding [redacted] Student Achievement, Staff Capacity, Managing and Aligning Resources, and Student & Community Engagement. This District-level document is intended to help guide development of School Improvement Plans (SIP) and school target setting.**

**In the summer of 2010, the Scorecard provided an opportunity to monitor progress over the first growth period, 2008-2009 to 2009-2010, for [redacted] Student Achievement, as well as selected metrics for Capacity, Resources, and Engagement. In the spring of 2011, we updated North Star achievement data for the 2010-2011 school year.**

**Annual targets are indicated in *italic* type. As we monitor progress, we observe some areas where we have met or exceeded our current year targets. Those cells are indicated with green type. Areas for which the District did improve results but did not achieve the targeted level are indicated in yellow type. Areas in which results either remained the same or decreased are in red type. Please see Appendix C for an explanation of target setting, including an explanation of improvement for Truancy, Suspensions, and Expulsions.**

**In selected areas the District not only exceeded our targets for the current year but also met or exceeded targets established for the following year. Those cells are indicated with blue type. In those instances the targets have been increased by adding percentage points to the targets for the following year. These increased targets are <u>underlined</u>.**

**Within [redacted] Achievement data cells, the numbers in parentheses are first the total number of individuals in that demographic category followed by the number of individuals in the sub-group who scored at the target level. Example – Grade 10 Writing, All Students in 2009-2010 - 20.9% of all students who took the test, or 296 students, achieved a District Writing Proficiency Score of 6 or above; and, the total number in that tested demographic group was 1418. Therefore, the numbers appear as (1418/296).**

**In some instances where the result increased, the actual number of individuals who performed at the target level may have decreased because the total enrollment in a specific grade/demographic/tested group decreased. As an example, note the table for 5th grade Mathematics for White students. The opposite may also be true for selected cells.**

**"NA" appearing in a cell indicates that data was not available.**

**This document will be reviewed on an annual basis by the Superintendent in consultation with the [redacted] School Improvement Council ([redacted]).**



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## A. The District's Scorecard for [redacted] Student Achievement
*(Coherent Governance R-2)*

1. **Grade 12 Target: All students will graduate successfully completing career or technical programs and/or graduate with an ACT score at or above the state average.**

   Board-Approved Target: We will improve the percentage of all students who graduate with a regular diploma and have successfully completed a career or technical program from 16.9% to 22.9%.

| Career & Technical Certification Completers | | | | | |
|---|---|---|---|---|---|
| | 2008-09 | 2009-10 | 2010-11 Actual-Target | 2011-12 Target | Vision |
| All Students | N/A | 16.9% (1216/205) | 12.6%-19.9% (1211/152) | *22.9%* | *100%* |
| White | N/A | 17% (763/130) | 20%-20% (712/142) | *23%* | *100%* |
| Black | N/A | 16.3% (227/37) | 10.5%-22.3% (294/31) | *28.3%* | *100%* |
| Hispanic | N/A | 17.1% (199/34) | 11%-23.1% (172/19) | *29.1%* | *100%* |
| LEP* | N/A | 17.9% (67/12) | 17.5%-23.9% (63/11) | *29.9%* | *100%* |
| Low SES* | N/A | 16.5% (376/62) | 13.7%-22.5% (459/63) | *28.5%* | *100%* |
| SwD* | N/A | 10% (20/2) | 0%-16% (18/0) | *22%* | *100%* |

* *LEP – limited English proficient*
*Low SES – economically disadvantaged identified for free or reduced lunch*
*SwD – Students with Disabilities*



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Board-Approved Target: We will improve the average ACT score from 20.5 to 21.1. We will increase the percentage of all students taking the ACT examination from 38.8% to 44.8%.

| ACT Examination | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Average Score | | | | % of Students Taking Exam | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 New-Old Target | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 New-Old Target | |
| All Stdnts. | 20.5 | 20.8-20.7 | 20.6-20.9 | *21.1* | 38.8% (1886/731) | 36.8%-40.8% (1958/721) | 40.6%-42.8% (1823/741) | *44.8%* | *100%* |
| White | 21.6 | 21.8-21.8 | 22.2-22.0 | *22.4-22.2* | 46.3% (1102/510) | 45.4%-48.3% (1046/475) | 48.3%-50.3% (930/449) | *52.3%* | *100%* |
| Black | 16 | 16.9-16.2 | 17.1-17.1 | *17.3* | 17.0% (489/83) | 17.3%-19.0% (554/96) | 23.6%-21.0% (537/127) | *25.6%-23.0%* | *100%* |
| Hisp. | 18.7 | 19.2-18.9 | 18.4-19.4 | *19.6* | 24.6% (260/64) | 22.9%-26.6% (323/74) | 27.9%-28.6% (308/86) | *30.6%* | *100%* |

2. **Grade 10 Target: All students will produce writing at the typical grade level in which they are enrolled or exceed grade-level standards.**

Board-Approved Target: We will improve the score of Full Academic Year (FAY) 10th grade students from 12.1% to 26.9% meeting or exceeding the District Writing Proficiency Score (6) as measured by the Extended Writing Sample by June 2012.

| Grade 10 Writing | | | | | |
|---|---|---|---|---|---|
| | Percentage of Students At or Above District Writing Proficiency Score | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 New-Old Target | |
| All Students | 12.1% (1463/177) | 20.9%-15.1% (1418/296) | 28%-23.9% (1376/385) | *31%-26.9%* | *100%* |
| White | 17.5% (800/140) | 27%-20.5% (719/194) | 38%-30% (708/269) | *41%-33%* | *100%* |
| Black | 4.4% (383/17) | 10.5%-10.4% (400/41) | 12.5%-16.4% (365/45) | *22.4%* | *100%* |
| Hispanic | 5.9% (255/15) | 19.7%-11.9% (274/54) | 20.7%-25.7% (275/57) | *31.7%* | *100%* |
| LEP | 4.6% (109/5) | 14.4%-10.6% (125/18) | 17.5%-16.6% (114/20) | *22.6%* | *100%* |
| Low SES | 5.2% (615/32) | 13.8%-11.2% (739/102) | 17.2%-17.2% (744/128) | *23.2%* | *100%* |
| SwD | 1.9% (212/4) | 3.8%-7.9% (213/8) | 8.4%-13.9% (214/18) | *19.9%* | *100%* |



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3. **<u>Grade 9 Target:</u> All 9th grade students will do Algebra at grade level or exceed grade-level standards.**

   <u>Board-Approved Target:</u> We will increase the percentage of 9th grade students who successfully complete Algebra I with a Grade B or higher from 28.3% to 37.3% as measured by student grades by June 2012.

| Grade 9 Algebra I | | | | | |
|---|---|---|---|---|---|
| | Percentage of Students | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 <u>New</u>-Old Target | |
| All Students | 28.3% (1520/430) | 24.3%-31.3% (1484/360) | 33.6%-34.3% (1518/510) | *37.3%* | *100%* |
| White | 35.9% (876/315) | 37.7%-38.9% (735/277) | 47.2%-41.9% (774/366) | *<u>50.2%</u>-44.9%* | *100%* |
| Black | 16.2% (356/58) | 9.4%-22.2% (360/34) | 11.9%-28.2% (412/49) | *34.3%* | *100%* |
| Hispanic | 16.5% (260/43) | 12.1%-22.5% (273/33) | 27.1%-28.5% (303/82) | *34.5%* | *100%* |
| LEP | 12.4% (121/15) | 5.6%-18.4% (143/16) | 18.1%-24.4% (149/27) | *30.4%* | *100%* |
| Low SES | 18.1% (558/101) | 12.2%-24.1% (657/80) | 22.4%-30.1% (703/158) | *36.1%* | *100%* |
| SwD | 2.6% (235/6) | 2.6%-8.6% (229/6) | 4.0%-14.6% (225/9) | *20.6%* | *100%* |



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4. **Grade 8 Target: All students will produce writing at the typical grade level in which they are enrolled or exceed grade-level standards.**

   Board-Approved Target: We will improve the score of Full Academic Year (FAY) 8th grade students from l0.2% to 23.9% meeting or exceeding the District Writing Proficiency Score (6) as measured by the [redacted] Extended Writing Sample by 6/12.

| Grade 8 Writing | | | | | |
|---|---|---|---|---|---|
| | Percentage of Students At or Above District Writing Proficiency Score | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 New-Old Target | |
| All Students | 10.2% (1301/133) | 17.9%-13.2% (1295/232) | 47.4%-20.9% (1378/653) | *50.4%-23.9%* | *100%* |
| White | 14.1% (669/94) | 25.0%-17.1% (640/160) | 54.7%-28% (642/351) | *57.7%-31%* | *100%* |
| Black | 4.0% (352/14) | 8.2%-10% (367/31) | 39.2%-16% (385/151) | *45.2%-22%* | *100%* |
| Hispanic | 6.7% (253/17) | 13.6%-12.7% (264/36) | 42.4%-18.7% (328/139) | *48.2%-24.7%* | *100%* |
| LEP | 7.7% (130/10) | 13.2%-13.7% (152/21) | 32.3%-19.7% (186/60) | *38.2%-25.7%* | *100%* |
| Low SES | 5.0% (656/33) | 11.4%-11% (731/83) | 40%-17% (833/333) | *46%-23%* | *100%* |
| SwD | 2.4% (207/5) | 4.9%-8.4% (205/10) | 21.5%-14.4% (200/43) | *27.5%-20.4%* | *100%* |

5. **Grade 6 Target: All students will read at the typical grade level in which they are enrolled or exceed grade-level standards.**

   Board-Approved Target: We will improve the Reading achievement of 6th grade students from 72.5% to 84.8% proficient and advanced as measured by the [redacted] Reading Test by June 2012.

| Grade 6 Reading | | | | | |
|---|---|---|---|---|---|
| | Percentage of Students | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 Target | |
| All Students | 72.5% (1330/964) | 78.8%-75.5% (1359/1071) | 77%-81.8% (1344/1048) | *84.8%* | *100%* |
| White | 83.3% (637/530) | 86.5%-86.3% (670/580) | 86.6%-89.3% (624/537) | *92.2%* | *100%* |
| Black | 59.6% (371/221) | 69.6%-65.6% (335/233) | 66%-71.6% (367/242) | *77.6%* | *100%* |
| Hispanic | 64.5% (307/198) | 73.1%-70.5% (327/239) | 69.1%-76.5% (335/235) | *82.5%* | *100%* |
| LEP | 55.4% (178/98) | 63.0%-61.4% (162/102) | 59.2%-67.4% (184/109 | *73.4%* | *100%* |
| Low SES | 61.6% (717/442) | 70.3%-67.6% (805/565) | 68.6%-73.6% (852/579) | *79.6%* | *100%* |
| SwD | 40.4% (184/74) | 49.3%-46.4% (210/103) | 40.6%-52.4% (220/88) | *58.4%* | *100%* |



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6. **Grade 5 Target: All students will do math at the typical grade level in which they are enrolled or exceed grade-level standards.**

   Board-Approved Target: We will improve the Mathematics achievement of 5th grade students from 65.6% to 74.6% proficient and advanced as measured by the [redacted] Mathematics Test by June 2012.

| Grade 5 Mathematics | | | | | |
|---|---|---|---|---|---|
| | Percentage of Students | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 Target | |
| All Students | 65.6% (1388/911) | 66.0%-68.6% (1356/895) | 65.7%-71.6% (1415/920) | *74.6%* | *100%* |
| White | 76.3% (706/539) | 78.3%-79.3% (649/508) | 79.7%-82.3% (599/479) | *85.3%* | *100%* |
| Black | 47.0% (338/159) | 49.4%-53% (354/175) | 45.9%-59% (375/173) | *65.0%* | *100%* |
| Hispanic | 60.8% (316/192) | 58.7%-66.8% (334/196) | 62.3%-72.8% (406/252) | *78.8%* | *100%* |
| LEP | 57.3% (171/98) | 55.2%-63.3% (212/118) | 57.3%-69.3% (227/129) | *75.3%* | *100%* |
| Low SES | 53.3% (751/400) | 55.2%-59.3% (844/466) | 56.6%-65.3% (901/505) | *71.3%* | *100%* |
| SwD | 40.7% (221/90) | 45.2%-46.7% (221/100) | 36.1%-52.7% (241/87) | *58.7%* | *100%* |



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7. **Grade 4 Target: All students will produce writing at the typical grade level in which they are enrolled or exceed grade-level standards.**

Board-Approved Target: We will improve the score of Full Academic Year (FAY) 4th grade students from 6.1% to 35.6% meeting or exceeding the District Writing Proficiency Score (6) as measured by the [redacted] Extended Writing Sample by 6/12.

| Grade 4 Writing | | | | | |
|---|---|---|---|---|---|
| | Percentage of Students At or Above District Writing Proficiency Score | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 Target | |
| All Students | 6.1% (1367/83) | 29.6%-9.1% (1427/422) | 33.4%-32.6% (1385/463) | *35.6%* | *100%* |
| White | 8.4% (659/55) | 36.4%-11.4% (638/232) | 39.2%-39.4% (595/233) | *42.4%* | *100%* |
| Black | 3.1% (357/11) | 20.6%-9.1% (378/79) | 24.7%-26.6% (356/88) | *32.6%* | *100%* |
| Hispanic | 4.2% (331/14) | 25.7%-10.2% (378/97) | 33.9%-31.7% (384/130) | *37.7%* | *100%* |
| LEP | 4.0% (227/9) | 21.3%-10% (240/51) | 31.3%-27.3% (233/75) | *33.3%* | *100%* |
| Low SES | 3.8% (794/30) | 23.6%-9.8% (891/210) | 28.7%-29.6% (920/264) | *35.6%* | *100%* |
| SwD | 3.2% (221/7) | 10.4%-9.2% (240/25) | 11.6%-15.2% (267/31) | *21.2%* | *100%* |

8. **Grade 3 Target: All students will read at the typical grade level in which they are enrolled or exceed grade-level standards.**

Board-Approved Target: We will improve the Reading achievement of 3rd grade students from 64% to 73% proficient and advanced as measured by the [redacted] Reading Test by June 2012.

| Grade 3 Reading | | | | | |
|---|---|---|---|---|---|
| | Percentage of Students | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 Target | |
| All Students | 64.0% (1449/927) | 67.8%-67% (1381/936) | 66%-70% (1402/911) | *73.0%* | *100%* |
| White | 76.6% (642/492) | 81.4%-79.6% (617/502) | 75.6%-82.6% (601/457) | *85.6%* | *100%* |
| Black | 49.1% (387/190) | 48.6%-55.1% (368/179) | 52.6%-61.1% (367/195) | *67.1%* | *100%* |
| Hispanic | 57.0% (384/219) | 62.3%-63% (366/228) | 63.1%-69% (404/255) | *75.0%* | *100%* |
| LEP | 53.6% (261/140) | 60.6%-59.6% (254/154) | 57.6%-65.6% (266/152) | *71.6%* | *100%* |
| Low SES | 53.3% (824/439) | 56.6%-59.3% (881/499) | 58%-65.3% (907/526) | *71.3%* | *100%* |
| SwD | 38.1% (252/96) | 39.6%-44.1% (260/103) | 34.7%-50.1% (248/84) | *56.1%* | *100%* |



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9. **<u>Kindergarten Target:</u> All students will read at the beginning 1st grade level or above by the end of Kindergarten.**

<u>Board-Approved Target:</u> We will improve the Reading achievement of all Kindergarten students from 24.6% reading at first grade level to 33.6% reading at first grade level as measured by MAP RIT score 1st grade national norms by June 2012.

| Kindergarten Reading | | | | | |
|---|---|---|---|---|---|
| | Percentage of Students | | | | Vision |
| | 2008-09 | 2009-10 Actual-Target | 2010-11 Actual-Target | 2011-12 Target | |
| All Students | 24.6% (1396/344) | 25.2%-27.6% (1385/349) | 28.9% 30.6% (1372/396) | *33.6%* | *100%* |
| White | 34.3% (682/234) | 36.6%-37.3% (628/230) | 38.8% 40.3% (641/249) | *43.3%* | *100%* |
| Black | 12.3% (398/49) | 13.1% 18.3% (403/53) | 16.7% 24.3% (414/69) | *30.3%* | *100%* |
| Hispanic | 17.4% (293/51) | 15.5%-23.4% (316/49) | 22.4% 29.4% (290/65) | *35.4%* | *100%* |
| LEP | 13% (181/24) | 11.6%-19% (216/25) | 20.3%-25% (153/31) | *31%* | *100%* |
| Low SES | 12.8% (822/105) | 17.2%-18.8% (885/153) | 20.9% 24.8% (863/180) | *30.8%* | *100%* |
| SwD | 12.2% (230/28) | 15% 18.2% (221/33) | 18.4% 24.2% (212/39) | *30.2%* | *100%* |



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## Appendix C: District Improvement Plan (DIP)

District Date: February 6, 2012

Our District Vision aligned with

**We will Graduate All Students Career and/or College Ready.**

Collaborative Culture of Improvement (Objective 4):
(How we will work to build a professional learning community with high expectations and accountability for the improvement of teaching and learning.)

**We will develop staff understanding of the Teaching and Learning Framework.**

**We will support delivery of Inclusive Services and Differentiated Instruction.**

**We will provide support for School Improvement Plans and use the Data Retreat process to analyze District and school-level data on a regular and frequent basis, as well as engage in continuous learning as it relates to the alignment of data literacy and instructional improvement.**

***Achievable Results (AR's) are indicated with an * in the Plan.**
****Strategies identified by the Guiding Coalition to support the AR's are indicated by ** in the Plan.**

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**Rationale for our Goal(s): Observations and hypotheses made during Cabinet data review and conversations with school staffs**

Goal # 1: ***All schools will achieve at least a 3% gain for all students and at least a 6% gain for minority, low SES and students with disabilities on each (Reading and Mathematics) trajectory point at the elementary, middle, and high school levels as evidenced on the District Scorecard by June, 2011.** (ACT results will be available by mid-August.)

| | Universal Classroom Strategies for all learners (Obj. 1) (Agreed upon classroom practices to engage every learner in achieving the above improvement goal.) | Interventions & Enrichments (Obj. 2) (Agreed upon interventions for struggling learners and enrichments for advanced learners to achieve the above improvement goal.) | Assessment & Data Use (Obj. 3) (How assessments and data will be used in the classrooms and District-wide to achieve the above improvement goal) |
|---|---|---|---|
| Objective Statement (high leverage strategy) | 1. We will ****Develop and implement the [redacted] Teaching and Learning Framework (Based on Understanding by Design/Differentiated instruction).** (Blaga) 10/25, P.D. plan developed<br>2. We will ****Implement and put "online" the School Net instructional management system and teacher dashboard.** [redacted] 0/25, P.D. plan started<br>3. We will seek to reduce secondary school truancy and suspension levels. ([redacted] 10/25, Safe & Supportive Schools initiative begun | 1. With ASC support, ****Each school will identify one strategy to build** culturally responsive **relationships** (e.g., employee, student, family working relationships, and implement **Crossroads Training) as documented in school improvement plan.** (Assistant Superintendents) 10/25, Leadership Empowerment Summit will occur on 12/7-8<br>2. We will ****support inclusive practices for all students, birth to college/career (ELL, SPED, Low SES etc.), and assure inclusive practice is a crucial focus across all strategies.** [redacted] 10/25, implemented at EL & MS<br>3. We will support each school to provide extended day learning to support students' academic achievement. [redacted] 10/25, Lighted Schoolhouse is at 23 locations<br>4. We will study school-based virtual learning alternatives to abeyance and expulsion that allow seamless transition in and out of the classroom environment | 1. ASC teams will support school Data Teams, including SchoolNet training & support as identified in School Improvement Plans. (Cabinet) 10/25, SchoolNet training has begun<br>2. We will conduct an annual Leadership Academy/Data Retreat or equivalent data review and analysis experience. [redacted] 10/25, changed to school-based data retreats with ASC support |



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| | | (Pochop) 10/25, enrollment is solid in year 1 | |
| Capacity Building (Obj. 5) (How we are going to learn and build skills and reflective practice of all staff to address the strategies listed.) | Task:<br>1. We will create awareness of the Teaching and Learning Framework, differentiated instruction, and teaching for understanding among all principals. (Blaga) 10/25, P.D. offered on 10/28<br>2. We will develop the capacity of five schools to implement the T&L Framework as measured by their participation in and implementation of SEWAC II. (Weiss) 10/25, 6 schools attending<br>3. We will **develop a comprehensive professional development framework that is embedded and differentiated.** (Syvrud)<br>4. We will use Title I Program funding to provide professional development opportunities to instructional staff for the purposes of raising student achievement in the core academic subjects and closing the achievement gap. (Fornal) | Task:<br>1. We will support the participation of a minimum of eight schools in Crossroads information sessions. ([redacted]) 11/3, P.D. offered on 10/28<br>2. After Crossroads information sessions at these schools, the entire staff will subsequently attend training. ([redacted])<br>3. We will support culturally responsive pedagogy (CRP) training by Dr. Gloria Ladson-Billings in at least two schools. ([redacted] 11/3, [redacted] consulting w/ Dr. Billings; 2/2/12 will be 2nd Empowerment Summit<br>4. We will expand and support inclusive services delivery. ([redacted]) 11/3, MS added to EL this year<br>5. Staff who teach reading and math in the extended day programs will be trained to meet the needs of all students. ([redacted] 11/3, training in planning stage | Task:<br>1. We will provide Data Retreat training for all principals. ([redacted]) 11/3, training for new principals will be offered<br>2. We will expand the number of ASC staff who are certified Data Retreat Trainers. ([redacted]) 11/3, new ASC staff will attend training 2/15-16/12 |



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| Aligning Resources (Resources needed-costs materials, staff time, etc. to address the strategies listed.) | Task:<br>1. We will allocate funds to support training and support of the Teaching and Learning Framework. ([redacted])<br>2. We will address the professional development needs of the District's instructional staff by committing to spend not less than 10% of the Title I Program's allocated funds for this purpose. [redacted] | Task:<br>1. We will reallocate funds to support training in culturally responsive pedagogy. ([redacted])<br>2. Funds will be allocated to expand the number of extended day program opportunities by two sites per year for students in our schools and community partnership locations through collaborated funding sources. ([redacted] | Task:<br>1. Budget documents and implementation will reflect reallocation. ([redacted]) |
| Engaging the Community (Obj. 7) (How we are going to engage stakeholders and establish relationships when addressing the strategies listed.) | Task:<br>1. We will ****maintain and support a system of collaborative problem solving for data-informed decisions (classroom to the boardroom) that directly impacts the** [redacted] [redacted] 11/3, ongoing among Guiding Coalition and DWSIC<br>2. We will ****design a system to effectively communicate progress and work on the North Star.** ([redacted] 11/3, 10-11 Scorecard on web & Public Policy Forum report in Oct. at [redacted]<br>3. We will ensure that the parents of each student enrolled at a District school, which is identified for improvement (SIFI), are notified by letter of the school's current status. [redacted] | Task:<br>1. We will build partnerships with community organizations to offer academic and enrichment programs that meet the needs of students and families. ([redacted]) 11/3, Cabinet engaging in "Great Conversation" w/ mayor & community<br>2. We will work with parents and community partners to communicate the need for extended day programming activities for all students. ([redacted])<br>3. We will work with elementary and middle school to build partnerships with parents and community agencies using the Joyce Epstein model. ([redacted] | Task:<br>1. We will include data-informed problem solving as part of SchoolNet training. ([redacted])<br>2. Increased communication regarding progress on the North Star trajectory points will be undertaken. [redacted] 11/3, Annual Report<br>3. We will develop a [redacted] measurement rubric to monitor engagement by the community. ([redacted]) |



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Goal #2: **We will improve the High School Completion (graduation with a regular diploma) rate percentage of All Students so that the following targets are met by June 2011 - All students from 74.4% to 77.4% graduating; White students from 82.9% to 85.9%; Black students from 57.6% to 63.6%; Hispanic students from 63.9% to 69.9%; LEP students from 71.7% to 77.7%; Low SES students from 63.2% to 69.2%, and, Students with Disabilities from 62.7% to 68.7%.**

| | Universal Classroom Strategies for all learners (Obj. 1) (Agreed upon classroom practices to engage every learner in achieving the above improvement goal.) | Interventions & Enrichments (Obj. 2) (Agreed upon interventions for struggling learners and enrichments for advanced learners to achieve the above improvement goal.) | Assessment & Data Use (Obj. 3) (How assessments and data will be used in the classrooms and District-wide to achieve the above improvement goal) |
|---|---|---|---|
| Objective Statement (high leverage strategy) | 1. We will develop ****Universal ACT Supports.** ([redacted] 1/18, 8th grade Explore completed & scheduling/funding for 9th Explore & 10th Plan completed<br>2. The number of basic and remedial classes will be reduced. ([redacted] 1/30, [redacted] Study Committee has met twice<br>3. We will implement a Comprehensive School Counseling program. ([redacted]d) 1/30, Concept approved by Board; [redacted] Study Committee on March agenda | 1. We will reduce the number of programs that only require students to be in school for less than a full day. ([redacted] 1/30, Plan to full-day options and alternate sites<br>2. We will support job skills exploration for students. ([redacted] 1/30, MS counselors will make students aware of career paths<br>3. We will expand our extended day programs to offer credit recovery & tutoring for high school students. ([redacted] 1/30, Currently in four locations and will add two more this year; possible replacement of Plato ([redacted]<br>4. We will support increased enrollment in AP/IB courses, including virtual learning opportunities. ([redacted] Principals) 1/30, Will identify a cohort of potential virtual learning students for grade 5 to 6 transition<br>5. We will ensure that students with disabilities are included in general education classes more often and are taught the general education curriculum | **1.** We will monitor [redacted] high school completion with a regular diploma and other student engagement, ACT, and Career/Technical Certification data for the District and for each school, including ***increase of average ACT score of at least .2 (2/10) of a point for all students and .4 (4/10) of a point for minority students and increase in percentage of students taking ACT of 2% for all students and 4% for minority students.** (Miller) 1/30, [redacted] Scorecard has been shared with Board, Cabinet, [redacted] Guiding Coalition, and posted to he the [redacted] web site |



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| | | and have access to general education textbooks. [redacted] 1/30, Inclusion PD is underway for elem. & MS<br>6. We will reduce the reasons that students with disabilities are not in school (truancy, suspensions, and expulsions). [redacted] 1/30, Discipline PD is underway for principals/teachers<br>7. We will study virtual learning opportunities for students in out-of-school settings. [redacted] 1/30 Expanding to community centers; current enrollment is about 200 students | |
| Capacity Building (Obj. 5) (How we are going to learn and build skills and reflective practice of all staff to address the strategies listed.) | Task:<br>1. We will continue training and support of counselors' implementation of the Comprehensive Counseling Program. [redacted]<br>2. We will develop a Master Teacher program model. [redacted] 1/30, [redacted] will meet with REA | Task:<br>1. We will develop a job/career training and exploration program. [redacted] 1/30, Planning with Rotary for Jr. Achievement Challenge 1 grant<br>2. Four credit recovery and tutoring programs will be offered at community centers. [redacted] 1/30, Programs are in place<br>3. We will provide training on the use of curriculum and academic tutoring for staff in credit recovery and tutoring. [redacted] 1/30, completed this year | Task:<br>1. Data sharing/analysis will continue on a regular basis in Cabinet meetings. [redacted] 1/30, Scorecard & Franklin Rm. data walls in place<br>2. We will explore additional staff capacity metrics for the [redacted] Scorecard. [redacted] 1/30, Planning has begun regarding alignment with proposed state model<br>3. We will monitor the number of high school students who receive recovered credit. [redacted] 1/30, Reported to Board in Oct. |



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| Aligning Resources (Resources needed-costs materials, staff time, etc. to address the strategies listed.) | Task:<br>1. We will develop a staffing formula that allows flexibility in assigning staff. ([redacted]) 1/30, EL staff is completed & support Staff formula is developed | Task:<br>1. We will reallocate resources to support student job exploration and full-day alternative programs. ([redacted]) 1/30, Job program started at Mack Center<br>2. We will allocate funds to support tutoring and credit recovery at community and faith-based centers. ([redacted]) 1/30, Funding has been implemented | Task:<br>1. Budget documents and implementation will reflect reallocation. ([redacted]) 1/30, Fund 80 resources have been allocated |
| Engaging the Community (Obj. 7) (How we are going to engage stakeholders and establish relationships when addressing the strategies listed.) | Task:<br>1. We will continue the Student Empowerment Summits with the Racine pastoral community to support student attendance and achievement. ([redacted]) 1/30, Ladson-Billings to Wingspread on Feb. 2<br>2. We will continue to collaborate with the [redacted] Advisory Committee to develop community programs. ([redacted]) 1/30, Meetings are held monthly with [redacted] staff<br>4. We will continue the High School Student Summits. ([redacted]) 1/30, LAP committee is planning for March 20 Summit<br>5. We will continue the [redacted] Early College Study Committee. ([redacted]) 1/30, Discontinued due to lack of finding | Task:<br>1. We will address the truancy problem by improving communication and connection with students and parents. ([redacted]) 1/30, Will meet regarding truancy centers<br>2. We will build on partnerships with the City of Racine and faith-based organizations to expand services. ([redacted]) 1/30, Partnerships in place | Task:<br>1. [redacted] truancy data will be monitored for a reduction in truancy rate. ([redacted]) 1/30, Reported to Cabinet and sent school reports to all sites<br>2. The Scorecard will be monitored for an increase in community engagement with partners and provision of space for programs. ([redacted]) 1/30, In addition to entities listed in Scorecard, Community Centers, [redacted] and faith-based organizations also provide space |



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Goal # 3: **We will improve the percentage of 9th Grade Completion of Algebra I-Algebra A/B with a grade of B or better or Enrollment in Geometry of All Students so that the following targets are met by June 2011 - All students from 24.3% to 34.3% completion; White students from 37.7% to 41.9%; Black students from 9.4% to 28.3%; Hispanic students from 12.1% to 28.5%; LEP students from 5.6% to 24.4%; Low SES students from 12.2% to 30.1%, and, Students with Disabilities from 2.6% to 12.3%.**

| | Universal Classroom Strategies for all learners (Obj. 1) (Agreed upon classroom practices to engage every learner in achieving the above improvement goal.) | Interventions & Enrichments (Obj. 2) (Agreed upon interventions for struggling learners and enrichments for advanced learners to achieve the above improvement goal.) | Assessment & Data Use (Obj. 3) (How assessments and data will be used in the classrooms and District-wide to achieve the above improvement goal) |
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| Objective Statement (high leverage strategy) | 1. We will align our Algebra instruction with the Common Core Standards (CCS). [redacted]<br>2. We will lower class sizes in Algebra. ([redacted])<br>3. We will increase enrollment in Algebra I while decreasing enrollment in Algebra A/B. [redacted]<br>4. We will develop more rigorous math instruction in grades 6, 7, & 8. ([redacted])<br>5. We will provide ASC support for math goals of middle and high School Improvement Plans. ([redacted]) | 1. We will eliminate remedial math courses. ([redacted])<br>2. We will support increased enrollment of minority students in rigorous middle school math classes. ([redacted])<br>3. We will support improvement of 9th grade student/teacher relationships. ([redacted])<br>4. We will support SIP goal disaggregation per [redacted] demographic groups. ([redacted])<br>5. We will support inclusive math instruction. ([redacted]) | 1. We will monitor the [redacted] 9th Grade Algebra data for improvement. ([redacted])<br>2. We will monitor the [redacted] 5th grade math data for improvement. ([redacted])<br>3. We will monitor the grade 6, 7 & 8th grade [redacted] math data for improvement. [redacted]<br>4. We will continue to encourage frequent and regular review of math diagnostic data by teachers/data teams. ([redacted]) |
| Capacity Building (Obj. 5) (How we are going to learn and build skills and reflective practice of all staff to address the strategies listed.) | Task:<br>1. We will revise math curricula in alignment with the CCS. ([redacted])<br>2. We will successfully implement the new Geometry text in grade 9. (Blaga)<br>3. Assistant Superintendents will focus school visits on improvement of math instruction and review of math data. ([redacted]) | Task:<br>1. We will support inclusive instruction training for middle and high school teachers. ([redacted])<br>2. We will support use of Crossroads and other culturally relevant pedagogy in middle and high school math instruction. [redacted] | Task:<br>1. We will develop a Framework to be used to reflect on implementation of inclusive math instruction. ([redacted])<br>2. We will develop a Framework to be used to reflect on implementation of culturally relevant pedagogy. ([redacted]) |



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| Aligning Resources (Resources needed-costs materials, staff time, etc. to address the strategies listed.) | Task:<br>1. We will allocate funds to support math curriculum revision. ([redacted])<br>2. We will lower class sizes in 9th grade Algebra. ([redacted]) | Task:<br>1. We will seek new teachers who have experience with inclusive instruction and culturally relevant pedagogy. ([redacted]) | Task:<br>1. We will develop [redacted] capacity metrics regarding these skill/capacity sets. [redacted] |
| Engaging the Community (Obj. 7) (How we are going to engage stakeholders and establish relationships when addressing the strategies listed.) | Task:<br>1. We will continue to utilize the Student Empowerment program with the pastoral community to support math instruction. ([redacted])<br>2. We will continue the Student Summit to obtain feedback for improvement of math instruction. ([redacted] | Task:<br>1. We will improve communication with and involvement of parents regarding math achievement. ([redacted])<br>2. We will target volunteer tutors toward math assistance. ([redacted] | Task:<br>1. [redacted] data will be monitored for increases in 9th grade Algebra results. ([redacted] |



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## Resource Mapping Plan:

*How will you utilize existing resources (time, staff, budget, materials, etc.) to reach your improvement goal?*

**How have you aligned all resources (financial, human, and physical resource) to advance the vision of equity and excellence in the District or district?**

**How have you acquired and managed resources to address learning inequities in your District or district?**

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| Time. *What adjustments in the District/staff schedule are needed to accomplish the tasks in this Improvement Plan?* | Adjustment in Time/Schedule<br><br>transformation will focus on the District Improvement Plan (DIP) and School Improvement Plan (SIP) support. |
| Staff Responsibilities. *What adjustments in staff responsibilities are needed to accomplish the tasks in this Improvement Plan?* | Adjustment in Responsibilities<br><br>job descriptions and responsibilities will be revised per the DIP. |
| Materials or Equipment. *What adjustments in materials or equipment are needed to accomplish the tasks in this Improvement Plan?* | Adjustment in Materials or Equipment<br><br>Materials and equipment currently in place will be redirected to support the DIP. |
| Budget. *In what ways will existing budget resources be allocated differently to achieve the tasks in the Improvement Plan?* | Adjustments in Budget Allocations<br><br>Budget priorities will be based on the DIP. |



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| Roll out Plan<br>*How will you engage all other staff members in this plan?*<br>Tasks/Acton Steps: | Resources Needed *(cost, materials, staff, time, etc.)* | Timeline | | Person Responsible/Persons Involved |
|---|---|---|---|---|
| | | Start Date | End Date | |
| DIP draft development | | August 2010 | Feb. 2011 | |
| Cabinet work plan development | | Nov. 2010 | Feb. 2011 | |
| Guiding Coalition (GC) – review DIP | | Jan. 25, 2010 | July 2011 | |
| Board/Aspen Group/Cabinet – review DIP, ARs, OEs, and R-2s | | Feb. 10, 2011 | Feb. 10 | |
| Guiding Coalition Meeting | | July 27, 2011 | June 27 | |
| Pay Day Meeting | | Aug. 3, 2011 | Aug. 3 | |
| Board Work Session for DIP | | Aug. 8, 2011 | Aug. 8 | |
| Board Meeting Information Item | | Aug. 15, 2011 | Aug. 15 | |
| DIP to Dept. of Public Instruction | | Aug. 17, 2011 | Aug. 17 | |
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## Appendix D: Interview Protocol

All Interviewees: Structures for data driven decision-making

1. Describe the ways your school gains data about student learning.
2. How does using data fit with other district/school initiatives or programs?
3. Were district/school administrators or staff trained in the use of data for decision making? Explain.
4. Are there systems in place to monitor student data and how it is used?
5. Who helped build the systems and who helps maintain them?
6. Which assessments does the school use?
7. Which assessments has the school used to improve the quality of teaching?
8. Which assessments has the school used to improve the quality of learning?
9. What kinds of teacher learning communities exist in the school?
10. Who typically serves on these learning communities?
11. What kinds of teacher leadership committees exist in the school?
12. Who typically serves on these committees?
13. What does the committee do?
14. How do teachers get feedback about their teaching practice?
15. How do they get feedback about student learning?

All Interviewees: Strategies used for data driven decision making

1. How does data use fit with your sense of good leadership?
2. How does data use fit with your sense of good teaching?
3. What has the use of data for decision making done for you? Has it helped you solve problems?
4. How do you implement the use of data for decision making?
5. How was this idea introduced to others (staff or students)?
6. How does the use of data fit with the school/district plan for student achievement?
7. What kinds of data do you rely on to improve student learning?
8. How do teachers get feedback about their teaching practice?
9. How do teachers get feedback about student learning?
10. What practices or events guide the school community to make sense of achievement data?
11. Are there established times when staff discuss student data?
12. Does staff examine disaggregated data? Are the disaggregated data presented at the student level, the classroom level and/or the school level?
13. Are there times for teachers and staff to engage in item analysis of standardized tests?
14. Which faculty and staff discuss data? How are these discussions structured?
15. What data is used to make instructional decisions?
16. What efforts have been made to align instructional programs with learning and assessment goals?
17. Who builds and maintains these structures?

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18. Is each teacher held responsible for improving instruction to meet learning and assessment goals?
19. Are there structures in place for teachers to collaboratively design instruction to meet learning goals?

Principal Interview Protocol

1. How do you use student achievement data?
2. Did you encounter any barriers or roadblocks in your use of student achievement data? How did you resolve those issues? What was the result?
3. How do teachers use assessment data? Have they always used student assessment data this way?
4. Who are the staff you see as leaders in the use of data for decision making?
5. What has been done to encourage and support the teacher's use of data for decision making?
    a. Are there staff development opportunities coming up?
    b. Who participates in these professional development activities?
    c. Are staff given times to read and interpret student assessment data? If so, when? How much time?
    d. Has your use of achievement data been incorporated into existing initiatives?
    e. Does staff engage in activities that require them to use data for decision making?
    f. Does staff produce results from data interpretation, for example, lesson plans?
6. How have you monitored the implementation of data for decision making?
7. Is there anything else I should know about the use of data for decision making?
8. Do you have any documents that would help me understand how data is used for decision making in your school?

Teacher Interview Protocol

1. How do you currently use data for decision making?
    a. What do you find most effective?
    b. What do you find least effective?
2. What do you think of data driven decision making? How does it fit with your sense of good teaching?
3. Has the way you have used data changed over time? If so, how?
4. What has data driven decision making done for you? Has it helped you identify and/or solve problems?
5. How do teachers get feedback about their teaching practice?
6. How do teachers get feedback about student performance?
7. Have you experienced difficulties using data for decision making?
    a. How was this difficulty addressed?
    b. What were the results of this action?
8. Has your use of data for decision making been monitored by school administration? How?

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9. How does data driven decision making fit with other district/school initiatives and programs?
10. How were you introduced to data driven decision making?
11. What have school leaders done to encourage and support teachers' use of data for decision making?
    a. Are there staff development opportunities coming up?
    b. Who participates in these professional development activities?

    c. Is staff given time to read and interpret student assessment data? If so, when? How much time?
    d. Has your use of achievement data been incorporated into existing initiatives?
    e. Does staff engage in activities that require them to use data for decision making?
    f. Does staff produce results from data interpretation, for example, lesson plans?
12. Is there anything else I should know about the use of data for decision making?
13. Do you have any documents that would help me understand how data is used for decision making in your school?

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# Appendix E: Teaching and Learning Framework

**Teaching and Learning**
**Director-Curriculum and Instruction**

Revised
2/14/2011

The implementation of the [redacted] Teaching and Learning Framework is the Guiding Coalition's top strategy for achieving the [redacted]. The purpose of this document is to expand on the attached work plan.

The Teaching and Learning Framework is the integration of *Understanding by Design* (Wiggins and McTighe, 2005) and differentiated instruction as described in *Integrating Understanding by Design and Differentiated Instruction* by Tomilinson and McTighe (2006). The Curriculum and Instruction department began using the UbD format for all curriculum writing project during the summer of 2009 and will be the format for all future projects. Due to the similarity of the Instructional Process (IP) and UbD, revisions to existing IP curriculum guides are needed to create alignment. The inclusion of Enduring Understandings to existing IP curriculum guides will be explored by the C&I department in the spring of 2011.

The design of this implementation plan for the Teaching and Learning Framework drew upon the experiences and knowledge of educators from [redacted] The following professional learning opportunities are intended for teachers, principals, educational assistants in instructional roles and the Teaching and Learning Division of [redacted] (area superintendents, curriculum and instruction and special education) will be instrumental in proving support to schools as they implement the T&L Framework. This implementation will take multiple years and create varying levels of deepening understanding.

**Phase 1: Awareness**
Goal: By the end of the 2010-2011 school year, all [redacted] instructional staff will have an awareness of the Teaching and Learning Framework.

During the first semester of the school year, principals and [redacted] staff took part in a book study and activities featuring *Integrating Understanding by Design and Differentiated Instruction* by Tomilinson and McTighe (2006). Materials will be provided for principals to use at staff meetings to create an awareness of and a common language for the framework. If requested, [redacted] support will be available for principals during these meetings. These activities and materials include, but are not limited to:

- *Understanding by Design, Professional Development Workbook* (McTighe and Wiggins, 2004) pages 250-252. Principals will conduct the "What is Exemplary Design for Learning?" activity at a staff meeting or early release session.

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- The principal will introduce the Teaching and Learning Framework to staff following the activity on page 252 of the workbook.
- Pages 258-260 can be used to define what teaching for understanding really is. This activity will allow staffs to discuss understanding and describe what it looks like.
- Use the Taking Stock of the Lesson document to discuss the following video clips
  - Jerry Sienfeld teaches history **http://cooperativelearning.nuvvo.com/lesson/9592-seinfeld-teaches-history**
  - Boston math teacher teaching for understanding **http://www.learner.org/resources/series34.html**

- In coordination with building principals, payday teams and the director of curriculum and instruction, model classrooms will be developed at the elementary (school to be determined) and secondary level ([redacted]) to provide opportunities to observe teaching for understanding and differentiated instruction in action.

**Phase 2: Personal Learning**

Building staff capacity through personal learning of the UbD and differentiated instructional practices is the second phase of implementation. Five building teams a year will attend the [redacted]. This eight-day workshop during the school year will allow teams to develop and implement an instructionally differentiated UbD unit for their classroom. In the past three years, over 100 staff members and teams from approximately 15 school attended [redacted]. By 2015, all schools will complete this phase.

Currently, the following schools are attending [redacted]

During the 2008-09 school year, [redacted]

As we continue with this implementation, staff members who attend [redacted] I do so with the understanding that they will be the point people in their schools for implementing the Teaching and Learning Framework. [redacted] staff, specifically the Teaching and Learning Division, will be available to provide support to the building teams as they create units and lessons using the framework. Additionally, model classrooms at the schools identified above will be resources for building teams.

It should be noted that the International Baccalaureate instructional model very closely mirrors the Teaching and Learning Framework. [redacted] and various departments within [redacted] received professional learning that is similar to [redacted] through the

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accreditation process. These schools are encouraged to hold staff meetings to discuss similarities between the two models.

**Phase 3: School-wide Implementation**

The third phase of implementation is implementation at the schools. School teams that attended [redacted] will be asked to attend [redacted] is a four-day workshop designed to deepen and refresh understanding of UbD and differentiated instruction and develop an understanding of the change process. [redacted] is held within the district through an agreement with [redacted] College. One school completed and five schools are in the process of attending [redacted] II. By 2016, all schools will complete [redacted]

Each school team will determine the implementation plan the Teaching and Learning Framework as part of the [redacted] experience. Inclusion of the implementation plan with school improvement plans is a key component of [redacted]

**Additional Supports**

Two-person supervisor teams assigned to each cluster to work with the data team to determine the professional learning needs for each school. Professional learning activities may include:

- In conjunction with [redacted] staff will be provided a T&L Framework trainer sequence.
- In-school professional learning opportunities. A provision of 15 substitutes will be set aside Tuesday-Thursday during the 2011-12 school year to provide in building professional development for Understanding by Design or differentiated instruction principles.
- In cooperation with [redacted] courses for credit will be offered after school and during the summer.
- An online professional development resource, **http://pd360.com**.

**Success Metrics**

A self-assessment survey of UbD and differentiated instruction will be developed using the *UbD Professional Workbook* and RUSD Climate Survey as resources. This survey will be given annually to assess progress toward implementation of the T&L Framework. The first administration of the self-assessment will occur in the spring of 2011.

Along with the Taking Stock of the Lesson document, pages 267-269 of the *UbD Professional Development Workbook* will be used as formative assessment tools to monitor implementation progress and professional development needs.

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## Teaching and Learning Framework Professional Development Matrix

***Phase 1:*** *Awareness For All Staff*
**Goal**: All staff will have an awareness of UbD and Differentiated Instruction (T&L Framework) so that a common language for discussing teaching and learning will be established.

**Objective**: By June, 2011, all staff will be aware of the Teaching and Learning Framework.

| Activities | Timeline | ASC Support |
|---|---|---|
| *UbD Prof Dev Wkbk,* pp. 250-252 | March-April, 2011, staff meeting | C&I |
| Intro T&L Framework doc along with p. 252 | March-April, 2011, staff meeting | C&I |
| *UbD Prof Dev Wkbk,* pp. 258-260 | April-May, 2011, staff meeting | C&I |
| Taking Stock of the Lesson doc while viewing Anneberg and Sienfeld websites | April-May, 2011, staff meeting | C&I |
| Development of model sites at [redacted] | Begin March, 2011 | [redacted] and reading support at [redacted] |

***Phase 2***: *Personal Learning*

**Goal**: Each school will have a team implementing the T&L Framework with [redacted] support so that each school has internal capacity to implement and sustain the implementation.

**Objective:** By June, 2015, each school will have one team that has developed a unit of instruction using the Understanding by Design template that incorporates differentiated instruction strategies for all learners.

| Activities | Timeline | ASC Support |
|---|---|---|
| Attendance at SEWAC I | Completion by June, 2015 | [redacted] |
| Monthly collaboration meetings to discuss unit development | Ongoing during [redacted] attendance | |
| Regularly scheduled | Beginning Fall, 2011 | T&L with [redacted] support |

[redacted]

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| | | |
|---|---|---|
| visits with teams implementing practices | | |
| PD 360 | Beginning Fall, 2011 | |
| | | |

***Phase 3***: *District Implementation*

**Goal**: Each school will implement the RtI model so that students experiencing difficulty or demonstrating characteristics of talented and gifted in academics or behavior have the necessary support and interventions to be a successful student.

**Objective**: By June 2013, all schools will implement RtI as the model to assist students who are working below grade level or experiencing behavior concerns.

**Objective**: By June 2013, all schools will implement RtI as the model to assist students who are not challenged in their current grade level placement or demonstrating talented and gifted behaviors.

| **Activities** | **Timeline** | **ASC Support** |
|---|---|---|
| Attendance at | Began 2011<br>Complete 2015 | |
| Creation of implementation plan as part of SIP | During attendance | |
| Team of and school team to work with staff to recreate experience (development of unit) | Semester after attendance | As noted |
| For credit course opportunities | Beginning Fall, 2011 in conjunction with unit development | T&L |

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**Appendix F: Friendship Elementary School's School Improvement Plan**

School: [redacted] Elementary Date: November 5, 2010

Our School Vision aligned with [redacted]

We anticipate our School Vision will be completed by late-February 2011 when our staff has a better understanding of is collected beliefs as a result of continued collaboration through our Professional Learning Communities.

Collaborative Culture of Improvement (Objective 4):
(How we will work to build a professional learning community with high expectations and accountability for the improvement of teaching and learning.)

- Grade Level (Homeroom Teachers and Support Staff) Teams meet once monthly (not to exceed 30 minutes) with Principal during common planning time to discuss concerns including student formative assessment observations with a goal of targeting gaps and preparing instructional adjustments.

- The creation of Professional Learning Community Teams (as defined on pg. 17-19 in Data Team Workbook) to facilitate an "all means all" approach to Professional Development time together. The community "teams" will be created based on staff concerns and interests that relate to our School Improvement Plan goals and supporting objectives. The PLC teams are as follows:
  - Improving Student Attendance
  - Promoting Academic Integrity & Student and Parent Engagement
  - Maintaining and Improving Building Climate
  - Addressing the Achievement Gap & Promoting Culturally Responsive Instructional Practices
  - Improving Student Math Literacy
  - Improving Student Reading Literacy

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School: [redacted] Elementary Date: November 5, 2010

| School: West Ridge Elementary<br><br>[redacted]<br><br>Date Plan Completed: 11/05/2010<br><br>School Improvement External Monitors: | Data Team Members (for School Improvement Planning and Work)<br><br>[redacted] | Data Team Meeting Dates and Times<br>* = *Monitoring Checkpoints*<br>Aug: 08/23/10 10:30 am<br>Sept: 09/08/10 7:15 am<br>Oct: 10/06/10 7:15 am<br>Nov: 11/03/10 7:15 am<br>Dec:12/01/10 7:15 am<br>Jan: 01/05/11 7:15 am<br>Feb: 02/02/11 7:15 am<br>Mar: 03/02/11 7:15 am<br>Apr: 04/06/11 7:15 am<br>May: 05/04/11 7:15 am<br>June: 06/01/11 7:15 am |
|---|---|---|

**School Improvement Goal(s):** *(Annual Student Outcome Goal)*
**WKCE/North Star Targets**

- **We will improve Evaluating and Extending Text (Reading) skills for all students so that 58.6% of our students will achieve grade-level proficiency as evidenced by a 5% increase in the % of students scoring proficient or advanced on the WKCE/WAA examination by 2011-12 from 53.6% in 2010-11.**
  **Subgroup improvement is as follows:**
  **White (3% increase) from 61.8% to 64.8%**
  **Black (6% increase) from 43.6% to 49.6%**
  **Hispanic (6% increase) from 50.5% to 56.5%**
  **LEP (6% increase) from 47.7% to 53.7%**
  **SwD (6% increase) from 39.2% to 45.2%**
  **Low SES (6% increase) from 50.7% to 56.7%**
- **We will improve Mathematical Processes skills for all students so that 57.3% of our students will achieve grade-level proficiency as evidenced by a 5% increase in the % of students scoring proficient or advanced on the WKCE/WAA examination by 2011-12 from 52.3% in 2009-10.**
  **Subgroup improvement is as follows:**

**Alignment with the North Star Vision and District Strategic Goals. Briefly describe how this student outcome aligns with specific strategic goals:**

- Kdgn: Beginning 1st grade reading level at end of kindergarten
- Grade 3: Proficient/advanced score in Reading on the [redacted]
- Grade 4: Writing score above state mean on [redacted]
- Grade 5: Proficient/advanced in Math on the [redacted]
- Grade 6: Proficient/advanced score in Reading on the [redacted]
- Grade 8: Writing score above state mean on [redacted]
- Grade 9: Complete Algebra with Grade B or higher
- Grade 10: Writing score above state mean on [redacted]
- Graduate with successful completion of career/tech program or with an ACT score at or above state average



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School: [redacted] Date: November 5, 2010

| | | | | | |
|---|---|---|---|---|---|
| **White (3% increase) from 59.6% to 62.6%<br>Black (6% increase) from40.1% to 46.1%<br>Hispanic (6% increase) from 27.5% to 33.5%<br>LEP (6% increase) from 55.5% to 61.5%<br>SwD (6% increase) from 43.6% to 49.6%<br>Low SES (6% increase) from 49.5% to 55.5%** | | | | | |
| **End-Of-Year Student Outcome Measure: 5% increase by June 2012 based upon November 2011 [redacted]<br><br>Assessment Tool: WKCE-CRT<br><br>Date of Final Spring Assessment: June 2012 (receive results)** | **Describe the tool used to measure student progress on the student outcome goal:<br>Assessment Tool:<br><br>Dates of staff meetings/early release and other data/monitoring conversations:<br><br>Staff Mtgs. (all at 7:15 am): 9/15, 10/12, 11/9, 12/14, 01/11, 2/15, 3/15, 4/12, 5/17<br>Early Release Prof. Development: 9/24 (2 hr.), 10/15 (2 hr.), 11/12 (2 hr.), 12/10 (3 hr.), 1/14 (2 hr.), 2/11 (3 hr.), 3/18 (2 hr.), 5/13 (2 hr.)** | **Period 1 Progress Assessment Date(s): 11/05/10** | **Period 2 Progress Assessment Date(s): 01/21/11** | **Period 3 Progress Assessment Date(s): 03/25/11** | **Period 4 Progress Assessment Date(s): 06/09/11** |

**Rationale for our Goal(s): Under our previous SIP, we met our goal of a 5% increase in Understanding Text. For the 2010-11 School Year, our Data Team felt it important to shift our focus to Evaluating and Extending Text (Reading) as this was our lowest area of student proficiency on the Reading [redacted]**

- Goal # 1 (Reading) : **We will improve Evaluating and Extending Text (Reading) skills for all students so that 58.6% of our students will achieve grade-level proficiency as evidenced by a 5% increase in the % of students scoring proficient or advanced on the [redacted] examination by 2011-12 from 53.6% in 2010-11.**
  **Subgroup improvement is as follows: White (3% increase) from 61.8% to 64.8%; Black (6% increase) from 43.6% to 49.6%; Hispanic (6% increase) from 50.5% to 56.5%; LEP (6% increase) from 47.7% to 53.7%; [redacted] 6% increase) from 39.2% to 45.2%; Low SES (6% increase) from 50.7% to 56.7%**



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School: [redacted] Date: November 5, 2010

| | |
|---|---|
| Staff Responsibilities. *What adjustments in staff responsibilities are needed to accomplish the tasks in this Improvement Plan?* | Adjustment in Responsibilities<br>Teacher-Driven Data Analysis<br>Data-Team Decision Making |
| Materials or Equipment. *What adjustments in materials or equipment are needed to accomplish the tasks in this Improvement Plan?* | Adjustment in Materials or Equipment<br>Title I Funds for Professional Development and continued Technology Integration |
| Budget. *In what ways will existing budget resources be allocated differently to achieve the tasks in the Improvement Plan?* | Adjustments in Budget Allocations<br>More-targeted use of Title I Teacher Staffing due to Budgetary Limitations |

| Roll out Plan<br>*How will you engage all other staff members in this plan?*<br>Tasks/Acton Steps: | Resources Needed *(cost, materials, staff, time, etc.)* | Timeline | | Person Responsible/Persons Involved |
|---|---|---|---|---|
| | | Start Date | End Date | |
| Data Team leads school-wide data analysis looking at Achievement Gaps to Target Instructional Improvement | Early Release Professional Development, Staff Meetings, Teacher Planning Time for Grade-level team meetings, Title I funds | September 2010 | June 2011 | All Staff, Principal |
| Staff inspired SIP created at 2010 August Shared Leadership Academy, refined by Data-Team in September-early November 2010 | 3 hours Early Release Professional Development | September 2010 | November 2011 | All Staff, Principal |
| Draft of SIP presented at Institute Day Staff Development | 2 hour Institute Day PD Time | August 2010 | August 2010 | All Staff, Principal |
| Continue Professional Development toward Best Instructional Practices that Support Closing Achievement Gap | Early Release Professional Development and Staff Meetings | September 2010 | May 2011 | All Staff, Principal |
| | | | | |

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School: [redacted] Date: November 5, 2010

| Capacity Building (Obj. 5) (How we are going to learn and build skills and reflective practice of all staff to address the strategies listed.) | Task: Professional Development Time spent learning additional, reviewing and refining existing best practice instructional strategies *on visualizing and expressing a written response (through statements and drawings) constructed response mathematical problems* to increase student proficiency on the SIP Instructional Goals. | Task: Professional Development Time spent learning additional, reviewing and refining existing best practice instructional strategies *in small group instruction, centers instructional techniques and inclusionary practices* to increase student proficiency on the SIP Instructional Goals. | Task: Professional Development Time spent learning additional, reviewing and refining existing best practice instructional strategies *in Mathematical Processes Skills* to increase student proficiency on the SIP Instructional Goals. |
|---|---|---|---|
| | Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: [redacted] Teaching Staff and Principal<br>Evid. Of Success: Maintain current tech. int. levels based on 09-10 Staff Survey | Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: [redacted] Teaching Staff and Principal<br>Evid. Of Success: Maintain current grouping/center (60-90 min./day) & inclusionary practices | Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: [redacted] Teaching Staff and Principal<br>Evid. Of Success: Meet Goal #2 (Math) in SIP |

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School: [redacted] Date: November 5, 2010

| Capacity Building (Obj. 5) (How we are going to learn and build skills and reflective practice of all staff to address the strategies listed.) | Task: Professional Development Time spent learning additional, reviewing and refining existing best practice instructional strategies *in Technology Integration* to increase student proficiency on the SIP Instructional Goals. | Task: Professional Development Time spent learning additional, reviewing and refining existing best practice instructional strategies *in small group instruction, centers instructional techniques and inclusionary practices* to increase student proficiency on the SIP Instructional Goals. | Task: Professional Development Time spent learning additional, reviewing and refining existing best practice instructional strategies *in Evaluating and Extending Test* to increase student proficiency on the SIP Instructional Goals. |
|---|---|---|---|
| | Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: [redacted] Teaching Staff and Principal<br>Evid. Of Success: Maintain current tech. int. levels based on 09-10 Staff Survey | Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: [redacted] Teaching Staff and Principal<br>Evid. Of Success: Maintain current grouping/center (60-90 min./day) & inclusionary practices | Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: [redacted] Teaching Staff and Principal<br>Evid. Of Success: Meet Goal #1 (Reading) in SIP |

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School: [redacted]

Date: November 5, 2010

| Aligning Resources (Resources needed-costs materials, staff time, etc. to address the strategies listed.) | Task: Training provided by [redacted] coach & Presenters from both [redacted] [redacted] | Task: Training provided by [redacted] coach, Presenters from both [redacted] [redacted] | Task: Training provided by [redacted] coach, Presenters from both RUSD [redacted] |
|---|---|---|---|

| Start time | End time | Person Responsible | Evid. Of Success |
|---|---|---|---|
| Sept. 2010 | May 2011 | [redacted] Curriculum Coordinator(s) [redacted] Teaching Staff and Principal | Training completed by May 2011 |

| Start time | End time | Person Responsible | Evid. Of Success |
|---|---|---|---|
| Sept. 2010 | May 2011 | [redacted] Curriculum Coordinator(s) [redacted] Teaching Staff and Principal | Training completed by May 2011 |

| Start time | End time | Person Responsible | Evid. Of Success |
|---|---|---|---|
| Sept. 2010 | May 2011 | [redacted] Curriculum Coordinator(s) [redacted] Teaching Staff and Principal | Training completed by May 2011 |

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School: [redacted]

Date: November 5, 2010

| | | | |
|---|---|---|---|
| Engaging the Community (Obj. 7)<br>(How we are going to engage stakeholders and establish relationships when addressing the strategies listed.) | Task: 5 Title I Parent Involvement Nights that focus on easy access enrichment activities. December Night will focus on Technology Integration practices that can be utilized in the home.<br><br>Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: Principal, Title I Teaching Staff, Other (Parent and Community Volunteers, Teachers, District Personnel )<br>Evid. Of Success: 33% of families attending at least one Title I Parent Involvement Nights | Task: 5 Title I Parent Involvement Nights that focus on easy access enrichment activities. October Night will focus on students and parents creating activities (make and take) that can be used in the home that mirror school small-group instruction. Community Volunteers through WINGS, Goodwill Grandparent Program, and [redacted] assist instructional staff by providing small-group and one-on-one tutoring.<br><br>Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: Principal, Title I Teaching Staff, Other (Parent and Community Volunteers, Teachers, District Personnel )<br>Evid. Of Success: 33% of families attending at least one Title I Parent Involvement Nights | Task: 5 Title I Parent Involvement Nights that focus on easy access enrichment activities. October Night will (also) focus on [redacted] extended/constructed response instruction so that parents can better assist their intermediate-level children. January/February Night will be held at the [redacted] Public Library and will focus on learning about our newly expanded resources and instructing parents in questioning techniques to elicit higher-level verbal responses that indicate an understanding of text.<br><br>Start time: Sept. 2010<br>End time: May 2011<br>Person Responsible: Principal, Title I Teaching Staff, Other (Parent and Community Volunteers, Teachers, District Personnel )<br>Evid. Of Success: 33% of families attending at least one Title I Parent Involvement Nights |

- Goal #2: **We will improve Mathematical Processes skills for all students so that 57.3% of our students will achieve grade-level proficiency as evidenced by a 5% increase in the % of students scoring proficient or advanced on the [redacted] examination by 2011-12 from 52.3% in 2009-10.**

  **Subgroup improvement is as follows: White (3% increase) from 59.6% to 62.6%; Black (6% increase) from40.1% to 46.1%; Hispanic (6% increase) from 27.5% to 33.5%; LEP (6% increase) from 55.5% to 61.5%; SwD (6% increase) from 43.6% to 49.6%; Low SES (6% increase) from 49.5% to 55.5%**



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School: [redacted] Date: November 5, 2010

| | Universal Classroom Strategies for all learners (Obj. 1) (Agreed upon classroom practices to engage every learner in achieving the above improvement goal.) | Interventions & Enrichments (Obj. 2) (Agreed upon interventions for struggling learners and enrichments for advanced learners to achieve the above improvement goal.) | Assessment & Data Use (Obj. 3) (How assessments and data will be used in the classrooms and school-wide to achieve the above improvement goal) |
|---|---|---|---|
| Objective Statement (high leverage strategy) | Incorporating into the daily schedule an additional 15 minutes of Mathematics Instruction (that may be inter-disciplinary in nature) a minimum of 3 days per week with a focus on increasing student ability to visualize and express a written response (through statements and drawings) constructed response mathematical problems. | Upper Primary and Intermediate level students demonstrating difficulty with Mathematical Processes skills will continue to receive a targeted small-group guided study for 1 to 3 times per week for 20-minutes each time. | Grade level team meeting and professional development time spent on studying formative and summative data and discussing/planning instructional strategies to positively impact student proficiency. |



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# Appendix G: Data Cards

**MAP Math: Primary Grades (K-1)**

Name_____

Homeroom _____

ID_____

| Fall RIT Score _____ | Target |
|---|---|
| O Algebra | |
| O Computation | (K) 142-156 |
| O Measurement & Geometry | (1st) 153-174 |
| O Number Sense | (2nd) 168-189 |
| O Problem Solving | |
| O Stats & Probability | |

| Winter RIT Score_____ | Target |
|---|---|
| O Algebra | |
| O Computation | (K) NA |
| O Measurement & Geometry | (1st) 162-183 |
| O Number Sense | (2nd) 176-196 |
| O Problem Solving | |
| O Stats & Probability | |

| Spring RIT Score _____ | Target |
|---|---|
| O Algebra | |
| O Computation | (K) 144-169 |
| O Measurement & Geometry | (1st) 168-190 |
| O Number Sense | (2nd) 181-202 |
| O Problem Solving | |
| O Stats & Probability **Growth** _____ | |

**MAP Math: Grades 2-5**

Name_____

Homeroom _____

ID_____

| Fall RIT Score _____ | Target |
|---|---|
| O Algebraic Relationships | (2nd) 168-189 |
| O Geometry | (3rd) 182-202 |
| O Measurement | (4th) 193-215 |
| O Process & Number | (5th) 201-225 |
| O Stats & Probability | |

| Winter RIT Score_____ | Target |
|---|---|
| O Algebraic Relationships | (2nd) 176-196 |
| O Geometry | (3rd) 188-209 |
| O Measurement | (4th) 198-220 |
| O Process & Number | (5th) 206-230 |
| O Stats & Probability | |

| Spring RIT Score _____ | Target |
|---|---|
| O Algebraic Relationships | (2nd) 181-202 |
| O Geometry | (3rd) 192-214 |
| O Measurement | (4th) 201-224 |
| O Process & Number | (5th) 209-234 |
| O Stats & Probability | **Growth** ____ |

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# CURRICULUM VITAE

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Teaching Credentials in the State of Wisconsin:

Director of Instruction
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Teaching English as a Second Language
Elementary Education, grades 1-6
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