

DISSERTATION

PRINCIPAL LEADERSHIP IN RESPONSE TO INTERVENTION (RTI): A MIXED
METHODS STUDY EXAMINING A SERVANT LEADERSHIP APPROACH TO
REFORM

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ABSTRACT

PRINCIPAL LEADERSHIP IN RESPONSE TO INTERVENTION (RTI): A MIXED METHODS STUDY EXAMINING A SERVANT LEADERSHIP APPROACH TO REFORM

The purpose of this study was to determine whether there was an association between servant leadership and the implementation of a systemic reform, specifically Response to Intervention (RTI). It was also the intent of this study to describe the relationship between direct principal involvement in RTI interventions and assessments, and the reading achievement gains in elementary schools. A focus group was also conducted to explain the quantitative results and validate the self-assessment of servant leadership, which influenced the decision to employ a mixed-methods design for this study. The quantitative analysis used a non-experimental associational approach.

The quantitative results of this study indicated there were no significant correlations between direct principal involvement in the delivery of assessments and interventions within RTI and student reading achievement gains. The study also concluded that there were no significant correlations between a principal's servant leadership style and implementation of reforms related to RTI. The explanatory qualitative section did support themes from the literature around modeling the way, changing belief systems, and changing approaches as part of change leadership. Other explanations for a lack of correlation were congruent with the literature. Systems issues

and an inability to focus on a deep implementation were partially responsible for a lack of student achievement results.

The conclusions of this study describe that the school principal is at the center of managing initiatives and reforms, yet more conclusive research is needed around school leadership practices that lead to student achievement. Additionally, programmatic reforms such as RTI do not necessarily lead to improved results, but focus and the ability to sustain an effective practice over time does have the potential to lead to improved results for students. Finally, people make systems function during change. A system that provides Open, Participatory Leadership provides the conditions for a successful reform.

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CHAPTER ONE: INTRODUCTION AND BACKGROUND

Background and Setting

Two recent policy changes have produced systemic changes for K-12 public schools. First, the Elementary and Secondary Education Act (ESEA) was a policy from President Lyndon B. Johnson's administration which became No Child Left Behind in 2001, Public Law 107-110 after an overhaul from President George W. Bush (Center for Public Education, 2006). NCLB arose in response to "the failure of schools to close the gap between achievement scores of economically advantaged, primarily non-minority students, and economically disadvantaged, predominantly minority students" (Fletcher, December, 2004). The premise of NCLB requires all students, regardless of income, race, language spoken at home, or disability to be proficient in reading, math, and science by 2014 (Center for Public Education). The second significant policy change in recent years was the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEIA) in 2004 which specified a shift for how schools must address nonresponders to classroom instruction. In the legislation, Response to Intervention (RTI) became a replacement for the discrepancy model which had previously been used to evaluate students for a learning disability. New IDEIA policy identified RTI as a model for monitoring and instructing students who struggled with the core instruction in reading and math.

In determining whether a child has a specific learning disability, a local educational agency may use a process that determines if the child responds to scientific, research-based intervention as a part of the evaluation procedures

[IDEIA 2004, Sec. 614.b.6.B] (U.S. Department of Education, 2004).

IDEIA, when combined with NCLB, impacts instruction, curriculum, and assessment for general education students as well as special education students. Significant aspects of school systems will require changes in order to meet the goals outlined within RTI. In effect, RTI is a legislatively mandated reform for K-12 public schools.

Response to Intervention (RTI)

RTI outlines a three-tiered response for identifying children with specific learning disabilities (SLD) “as a substitute for, or supplement to, IQ-achievement discrepancy” (Fuchs, 2005). Colorado revised the Exceptional Children’s Education Act to include criteria under the Response to Intervention model for determining whether a child had a specific learning disability and to abandon the discrepancy model by August 14, 2009 (Colorado State Board of Education, 2005, p. 28).

Under an RTI system, school districts apply tiered interventions, collect data, and work through a problem-solving process prior to initiating a special education referral. The emerging RTI models rely on a multi-tiered system (usually three or four tiers) of evidence-based interventions, becoming progressively more intense based on student responses to those intervention (Hoover, 2008). With this legislation, significant changes will occur for a school system’s approach to meeting the needs of underperforming students. “Thus, the potential elimination of severe discrepancy as a component of learning disabilities and the simultaneous introduction and use of RTI as a potential substitute component of LD in federal law is no small matter” (Kame’ enui, 2007). The

policy creates an entire systems overhaul for schools and how curriculum, instruction, and assessment is determined and implemented.

Principal Leadership During Reform

Despite the prospect that RTI will help schools meet the requirements under No Child Left Behind (NCLB) for ensuring 100% proficiency in reading and math for all students, the school principal can make or break any systems implementation or reform effort. The success or failure of any organization or initiative within the organization can be traced to effective leadership. Undergoing a shift to RTI will present systemic organizational changes, which will be led by school principals on a daily basis.

The search for effective organizational leadership is a challenge for schools enmeshed in mandated reform. The need to study leadership during reform has broad implications as mandates become increasingly more high-stakes. In looking at mandates, classifying them as a first order change or second order change helps to envision the systemic magnitude of reform. Researchers at Mid-Continent Research for Education and Learning (McREL) have categorized systemic changes as either a first or second order change. First order changes typically impact the organization in minimal ways. They are largely extensions of the past and fit existing paradigms. A second order change is a break with the past, lies outside of existing paradigms, is complex, requires new skills and knowledge, and is implemented by stakeholders (Galvin, 2007). RTI will be a second order change within the public school system. School principals will hold the levers for human resource, political, symbolic, and structural changes during RTI implementation. “Leadership is critical for effective implementation of RtI. The success of RtI will be determined, to a great extent, by the degree to which district and school

leaders are able to move the focus of RtI from philosophical understanding to actual practice. District and school leadership is imperative to the sustainability of the model” (Colorado Department of Education, 2008, p. 4). Changing “actual practice” within any system needs to be a thoughtful undertaking. The desire to maintain the status quo can be deeply rooted.

Research Problem and Context

With the 2014 deadline looming for 100% of students to be proficient in reading and math, reforming curriculum, instruction, and assessment continues to be a frantic push in K-12 public schools. Adding to this, RTI policy altered practices for general education and special education. The school principal is at the center of both policies. Leadership during reform must identify the crucial leverage points to encourage change while maintaining the mission and values of the organization. Studying how a leadership style can transition schools effectively during reform warrants further research. As states and districts prepare school leaders to undergo the latest reform, identifying factors that support leaders to work through issues with teachers, parents, and students has high impact.

One variable that has been studied is the relationship between the theoretical framework of servant leadership and school principals. In previous studies, student achievement, job satisfaction, and school climate were determined to be impacted by a school principal who followed servant leadership principles (Laub, 2010). Therefore, servant leadership might be a factor in implementing RTI effectively in public schools. The researcher’s desire to study the concept of servant leadership arose from attempting to implement several hierarchical mandates that were systemic reforms. In questioning

the best approach to manage school reform in a humanistic manner, the conceptual underpinning of servant leadership became the basis for this study. For the purposes of this study, servant leadership will be associated with a collaborative style rather than a hierarchical or transactional style.

Policy requirements from NCLB and IDEIA require systems realignment for all aspects of a K-12 public school. The structural, human, political, and symbolic frames are ultimately leveraged by school leadership. RTI policy impacted curriculum, instruction, and assessment in significant ways and came with no additional federal or state resources for implementation. Researching effective systemic change processes related to school leadership are imperative to managing external accountability forces within existing and diminishing resources. The central problem is that there are more mandates, no new resources, and the management of both is left to school-based leadership. A recently adopted Colorado policy, Senate Bill 191, has also required that 50% of a principal and teacher's evaluations are to be decided by student achievement results ("Concerning Ensuring Quality Instruction Through Educator Effectiveness," 2010). There is limited data defining whether a principal impacts student achievement. There is even less information about which principal leadership practices might correlate with student achievement gains. This study attempts to add to the discussion about how systemic reforms are managed within public schools and whether the servant leadership style impacts student achievement. Quantitative investigations of student achievement data provide one look as to whether the system is achieving success; however, those data points do not describe the practices or conditions which could be replicated leading to that achievement. School leaders' experiences and voices are necessary to understand

what factors contribute to a system that achieves. This necessitates an additional qualitative component looking for thematic explanations.

Purpose of the Study

The purpose of this mixed methods study is to test the theory of servant leadership as applied to RTI reform. The two parts of this study are to examine whether the 1) principal's face-to-face involvement with students in delivering and assessing interventions relate to student reading achievement, and 2) the relationship between school principals' score on the servant leadership self-assessment (SL) and the schools' implementation of reforms required by RTI. In this study, servant leadership will be operationalized through the principal's face-to-face involvement with students in delivering interventions or assessments recommended through RTI best practices. The second qualitative phase will be conducted as a follow-up to the quantitative results. Through this explanatory-sequential design, the researcher intends to make connections to actual principal practices which impact student achievement and managing systemic reform. In this explanatory follow-up, servant leadership and systemic reform from RTI were discussed with elementary principals from the Thompson School District. By exploring the theoretical framework of servant leadership, the hope is to draw conclusions that might guide actual practices for school principals working with RTI or undergoing other systemic reforms.

The data for this study were collected in the form of surveys, reading scores, and focus groups from the participants. The nature of self-reported data required this study to collect both quantitative and qualitative data so that principal's responses and student

achievement data could be validated with their experience, which influenced the decision to employ a mixed-methods design for this study.

Research Questions

To study whether a school principal's face-to-face involvement, which will be servant leadership operationalized in this study, in delivering interventions and assessments impacts student achievement, systems reform, and RTI implementation, the following main research questions were investigated:

1. Is there an association between reading achievement gain scores in elementary schools and the level of direct principal involvement in delivering interventions and assessments?
2. Is there an association between elementary school principals and their levels of servant leadership and the degree of the schools' implementation of systemic changes related to RTI policy?
3. What are principals' perceptions about reading achievement scores and the direct involvement of the principal in delivering and assessing interventions?
4. What are principals' perceptions about a servant leadership approach and the implementation of a systemic reform, such as RTI?
5. How do the quantitative and qualitative data inform the value of servant leadership and implementation of RTI?

Definition of Terms

Nonresponders

Students are defined as nonresponders to the core program of curriculum and instruction if they “fell 1 standard deviation below their average achieving peers in terms of performance level and slope (growth)” on an assessment (Swanson, Harris, & Graham, 2005, p. 444).

Discrepancy Model

Prior to the reauthorization of IDEIA in 2004, psychologists used this model to determine whether a student was learning disabled. The model is “the discrepancy between a student's cognitive IQ and achievement test scores” (Greer, 2005, p. 44).

Learning Disabled (LD)

“Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span” (National Joint Committee on Learning Disabilities, 1990) .

Developmental Reading Assessment (DRA2)

A reading assessment designed to “(1) accurately and effectively assess students’ Reading Engagement, Oral Reading Fluency, and Comprehension; and (2) to help identify students’ strengths and weaknesses in order to inform future instruction”(Pearson Education, 2009, p. 2).

Self-Assessment of Servant Leadership (SL)

The Self-Assessment of Servant Leadership (SL) is a 62 item assessment instrument that condenses 12 categories of servant leadership into four domains: personality, relationship, tasks, and processes (Taylor, 2002).

Servant Leader

A servant leader is someone “whose primary motivation is a desire to help others” (Spears, 1995, p. 3). For the purposes of this study, a servant leader will be operationalized as a principal who engages in face-to-face instruction with students on a regular basis. The self-assessment of servant-leadership is an additional method of defining servant leadership.

Principal

The head or director of a school serving as the educational leader.

RTI

Response to Intervention is the identified practice for identifying whether children are learning disabled, as defined by federal policy from the reauthorized Individuals with Disabilities Education Act.

Systemic reform

Refers to the practices of revising or changing multiple aspects of a given system, such as human, political, structural, and symbolic frames.

Delimitations

By choice, this study is delimited to the students and principals within Thompson R2-J School District. The primary reason is that the data are easily accessible by the

researcher. The research questions represent a meaningful, but simple approach. This study will support the Thompson School District central office to evaluate the progress that has been made to implement RTI and the subsequent effects on student achievement. Eventually, this study hopes to make recommendations for further professional development or leadership considerations that support RTI policy implementation and organizations that study leadership practices.

Assumptions

The following are assumptions that will be made in order to complete this study:

1. Assume that school principals will answer honestly about their level of involvement in RTI interventions and assessments.
2. Assume that the selected sites for study will not be contaminated by the interactions with the researcher.
3. Assume that the data sets requested from the school district are accurate and reflect the reading achievement of students.

Limitations

There are some weaknesses to the proposed study. The research design is mixed methods and the quantitative data is ex-post facto. Possible threats to external validity could arise if the actions of the school principal (independent variable) are not explicitly defined or verified, and the interaction effects of extraneous factors are not adequately controlled. Another consideration would be the return rate of completed SL surveys. This study is limited to the accessible population of K-5 elementary school students and principals. The sample size is limited to 20 principals, which is a small sample to conduct quantitative data analysis. A subsequent qualitative phase will address some of

the concerns over the small sample size. While this study will serve to evaluate the RTI progress within the Thompson School District and a specific leadership practice, the actual application of the findings could be meaningful to the theoretical population of school and district administrators across the United States.

Significance of the Study

Examining servant leadership and its relationship to school principals during reform will be beneficial in a number of ways. This research will add to the body of knowledge related to variables leading to successful systemic reform. State agencies, federal organizations, local school boards, district officials, and educational leadership programs would be interested parties because of the stakes involved in creating and managing high achieving schools. This research potentially has significance in two areas: scholarly research and educational practice.

Scholarly Research

Although a number of studies have been conducted on servant leadership in schools, no published research could be found in educational journals studying servant leadership in relation to school principals and RTI reforms. While many articles on RTI reference the importance of school leadership to implementation, searching Academic Search Premier (EBSCOhost) produced no results for principal leadership and RTI.

Previous research has shown that servant leadership qualities contribute positively to school climate, teacher's job satisfaction, and student achievement (Laub, 2010). This research would have an impact on professional practices within an organization, leadership styles linked to successful reforms, and leadership styles that impact student achievement. Further research centers on whether abandoning the discrepancy model is

appropriate practice and the implications of using formative assessments to define learning disabilities (John Hale, et al., 2010) and (Case, 2003). One study remarked that RTI policy was enacted before there was enough scientifically validated research to warrant its' effectiveness over the discrepancy model. Investigating whether a high degree of RTI implementation has a relationship to reading achievement could contribute to the discussion about whether RTI is a validated practice.

Educational Practice

In times of reform and high-stakes accountability, more transactional or hierarchical forms of leadership might take precedence. In contrast to these styles, servant leadership seems as if it can impact the “bottom line” while maintaining a healthy, collaborative climate during reform. In light of the many top-down reforms and mandates given to K-12 schools by the state and federal government, effective leadership styles that build a shared capacity to address the issues strengthen educators' capacities and dispositions to manage the changes.

Educational leadership organizations that instruct future school leaders or provide professional development to current school leaders would potentially be interested in this research as they craft curriculum and instructional experiences to prepare school principals or educational leaders. While nearly every guide for RTI implementation emphasizes the importance of school leadership, few specifics are given for how a principal should manage the system change. The relationship of school principal involvement in the administration and assessment of interventions is an important topic within a rapidly growing field of research around RTI. While leadership is emphasized repeatedly throughout RTI, effective leadership practices seem to be less empirically

validated than other aspects of RTI. The principal does make an impact on the achievement of students. Hattie assigns a small effect size of $d= 0.36$ after creating a meta-analysis of factors relating to student achievement (Hattie, 2009, p. 83). The empirically validated school leadership approach remains a difficult question to answer within the field of RTI research.

Researcher's Perspective

The researcher is a current elementary school principal who wants to explore leadership practices that lead to effective systemic changes within the K-12 environment. In addition, the researcher is employed at Colorado State University in the School of Teacher Education and Principal Preparation and is very interested in supporting principals to develop the skills and dispositions to lead adults through policy changes, whether they are local, state, or federal. The researcher currently teaches a course at CSU for aspiring principals in leadership and ethics and culture and climate. Both areas could be enhanced by identifying more empirically validated leadership practices that move K-12 organizations forward in meeting more students' needs.

Out of frustration with more hierarchical solutions given through mandates, the researcher wanted to explore models of leadership that supported high-stakes reform while maintaining more democratic decision-making and ownership. Servant leadership has possibly been viewed as a “soft” approach to organizational management. Servant leadership, as defined for schools, is a practice of building collaborative solutions and serving in a manner that shows commitment to the profession and those served over the wants, desires, and ego of the leader. In the interest of maintaining high quality practices

within educational leadership, the researcher wanted to name whether a collective process positively impacts systemic changes in K-12 systems.

Summary and Conclusions

Despite the limitations of this study, there is sufficient reason to conduct this research. Being a K-12 public school administrator or teacher has come down to producing results and using scientifically based practices. While this study will not go to the depths of randomized, experimental design, it will study whether a particular leadership practice might make a difference in guiding student achievement and systemic changes. In particular, studying the conceptual underpinning of servant leadership contributes to the discussion and further research in organizational and human resource management.

CHAPTER TWO: REVIEW OF LITERATURE

Introduction

The purpose of this study is to examine servant leadership as an applicable theoretical framework for school principals during times of reform. Response to intervention (RTI) as called out in IDEIA is the specific policy reform under investigation. This literature review is organized conceptually. The first section focuses on RTI and NCLB policies as related to systems reforms for curriculum and assessment practices impacting general education and special education students. A subset of this section will examine the impact of supporting special needs students, specifically students identified as learning disabled, in meeting the requirements of NCLB. The second section of the literature review focuses on the theoretical framework of servant leadership and what relationship it has for practice during high accountability, policy reform. The final section of the literature review focuses on theories of systemic change and its' relevance for principals during reform.

RTI, NCLB, and Special Needs

The primary expectation of NCLB is that 100% of children in American schools will be proficient in reading, math, and science by 2014 (Center for Public Education, 2006). Children with special needs are of particular concern within the high-stakes testing environment. High-stakes tests present a significant challenge for students with learning disabilities. Potential challenges and unintended consequences for educating

students with disabilities in order to comply with NCLB and the Individuals with Disabilities Education Act (IDEA) also contribute to this discussion.

The specific practice of RTI was called out in the reauthorization of IDEIA as the model for referring future students to special education services. Within the parameters of RTI, research-based instruction and interventions must be delivered for the child, and progress in that intervention has to be documented to close the gap between the current level of performance and proficiency. Only after a documented failure to respond would a child then be referred to special education services for a learning disability. IDEIA and NCLB are intentionally linked. NCLB requires that the gap between special needs students and general education students close, and IDEIA names RTI as a practice to close the gap through early identification and treatment.

IDEIA and NCLB

The reauthorization of the Individuals with Disabilities Education Improvement Act (IDEIA) in 2004 shifted from access provisions to general education to performance expectations. This legislation connected the dots between NCLB and students with disabilities. IDEIA accountability processes named a shift for how schools must address non-responders to classroom instruction; in effect, this became a policy that named a change for general education practices. Never before had IDEIA attempted to direct in such a significant way the practices in the general education setting. In the legislation, Response to Intervention (RTI) became a replacement for the discrepancy model which had previously been used to evaluate students for a learning disability. New IDEIA policy identified RTI as a model for monitoring and instructing students who struggled with the core instruction in reading and math. The premise of RTI changes the process

for identifying students for a learning disability. It operates under the presumption that until a student demonstrates failure after a period of research-based instruction, only then is the child eligible to be designated as learning disabled. The insinuation might be that students previously identified as learning disabled, actually never were. The law indicates that adequate research-based, classroom instruction had not been provided. The creation of disabilities then rests with the teachers and schools, not inherently with a physical, psychological, or emotional condition of the child (Wasta, 2006). Proponents of changes in IDEIA applaud the increasing expectations from access to the general education, the previous emphasis, to accountability to perform within the general education arena. The positive aspiration is that if students are held to a higher standard, they are likely to achieve at a higher level.

Components of RTI

Implementing RTI has significant impacts for school systems. Existing practices are challenged or changed in many areas of operation ranging from assessments, curriculum, and instruction for general education students and students with special needs. Eliminating the discrepancy model set many of these changes in motion.

Discrepancy Model Ends

An area of debate is whether using RTI for referrals to special education can legally be made. The literature around RTI describes the legal implications of identifying students as learning disabled through a body of evidence based upon a response to an intervention in place of the prior discrepancy model, which identified students as learning disabled if they fell 50% discrepancy between aptitude (such as IQ) and achievement (IRA, 2008, Feb./Mar.). Unfortunately, reliance on the discrepancy model to determine

eligibility for special education services resulted in students not receiving help or assistance for a learning disability until they had experienced multiple years of failure (Bradley, Danielson, & Doolittle, 2007). Many teachers referred to this practice as the “wait to fail” model. A local education agency (LEA) must prove that a child has a true learning disability and that a lack of performance is not due to a lack of appropriate instruction in reading or math. Further research centers on whether abandoning the discrepancy model is appropriate practice and the legal implications of using formative assessments to define learning disabilities (J. Hale, et al., 2010) and (Case, 2003). One study remarked that RTI policy was enacted before there was enough scientifically validated research to warrant its’ effectiveness over the discrepancy model. “Although RTI holds significant promise for the practice of special education, it is seriously underdetermined empirically, particularly the use of interventions that are yoked to the use of ‘technically sound instruments’ as required by the federal law” (Kame’ enui, 2007, p. 6).

Other studies question whether the assessment of RTI is psychometrically defensible and sufficiently comprehensive to verify the existence of a learning disability (Batsche, 2006) and (Reynolds, 2009). One claim is that over-identification of LD students has been perpetuated by the discrepancy model; therefore, a more empirically sound method of determining LD eligibility is a response to treatment model. “Under an RTI model, the determination of LD would be made if the student displays a dual discrepancy (Vaughn and Fuchs, 2003)—academic skills that are significantly below benchmarks for the grade and a subnormal slope of progress in response to research-based interventions (along with the demonstrated need for special education that is

required for eligibility under IDEIA)” (Kovaleski, 2007, p. 85). While it seems policy makers may have enacted legislation before it could be sufficiently empirically validated, it has sparked more investment and interest in further research for RTI due to the large scale implications for schools and families.

Empirically-validated curriculum

The area of research around the range and variety of empirically validated materials for core curriculum and reading intervention programs has grown. Within RTI, all curriculum has to be scientifically validated to produce results. This has created a whole business dedicated to the dissemination of research around programs and materials such as the *What Works Clearinghouse* and *Florida Center for Reading Research*. Some of the controversy surrounding using only scientifically-validated instruction and materials would force educators to abandon approaches or materials that have appeared to work in their settings but have not been validated by research. Suggesting educators remove professional expertise and judgment from daily lesson planning and resource selection creates no small amount of controversy. “That the NCLB (scientifically-based research) SBR mandate also appears to discount the utility of teacher judgment, that is, their clinical judgment and experience in making educational decisions, only adds to this complexity” (Faircloth, 2004, p. 41). Within the instruction and intervention is an emphasis on fidelity of delivery. “Treatment integrity” or fidelity of delivery would rely almost entirely on teacher reports (Reynolds, 2009). If treatment integrity is a necessary component of ensuring that students receive the scientifically-validated curriculum in the manner in which it was intended, then a significant aspect of documenting a student’s failure to respond is due to a learning disability is an issue in the system.

The methods to scientifically validate instruction are a point of controversy. The federal government endorsed strategy is a randomized experimental group design methodology for defining expected practices (Simpson, LaCava, & Graner, 2004). While this is an admirable standard, the possibility of generating research at this level that changes classroom practice will take years to negotiate. Educational professionals would argue that illustrative, comparative, and predictive research that is built from sound questions contributes equally to the body of knowledge about sound instructional practices as experimental design (Algozzine, 2003). At this point in time, “scientifically based instruction” refers to empirically validated materials more often than instructional methods. A concern might be that classroom instruction could be reduced to teachers reading a script from a scientifically validated program, rather than responding to student needs. Professional development that supports rigorous curriculum design and critical thinking skills might be shelved in favor of “box” programs that require teacher fidelity.

Financial Implications

The financial commitment to invest in scientifically based instructional materials that are proven to support students in reaching standards in reading, math, and science is a significant matter. While curriculum vendors claim alignment to standards and push scientific reports at educators, the number of strategies and materials that meet the randomized experimental requirement is actually quite small. On the *What Works Clearinghouse* website, the federally endorsed warehouse for research on scientifically based instruction, 171 reviewed beginning reading curriculum programs are listed, but fewer than 25 were determined to have positive effects (U.S. Department of Education, 2010). Billions of taxpayer dollars spent on curriculum materials could be tossed out of

classrooms if they fail to meet the research standards defined by the federal government. A further trend in curriculum choices is the exclusion of instruction in non-tested subjects such as social studies and the arts. Social studies materials, music, and art programs could potentially become an afterthought when it comes to allocating curriculum or staffing resources.

Interventions and Tiers

RTI research describes a three tier approach to delivering instruction and intervention. The first tier is a core curriculum that is research-based where 75% of students would be proficient with consistent application of the curriculum. Within this tier, a scientifically validated curriculum must be presented. It has been noted that NCLB used the term “scientifically based instruction” over 100 times in stating the expectation that research should serve as the basis for curriculum, instruction, and assessment, particularly in reading (Kovaleski, 2007). The next tier involves supplementary interventions typically for small groups of students. These “standard protocol” interventions feature the use of tightly structured teaching using commercially available instructional packages. The third tier provides intensive interventions for students who have not responded to the core or supplementary instructional programs (Buffum, 2009).

Further studies debate specific reading interventions and their ability to help a child perform on standardized measures. The first tier is considered the universal core that all children receive for reading or math instruction. Children who fail to make progress and meet established benchmarks move on to a second tier of instruction. This level involves scientifically validated small group tutoring (Fuchs, 2006). If a child in this tier fails to make progress, then he or she moves on to a third tier or tertiary level

where an individualized, inductively formulated plan seeks to meet the child's specific needs. Within the tiers, scientifically validated interventions and curriculum take precedence over all curriculum and instructional methods. Efficacy, effect size, and fidelity of implementation are all considerations.

Research-based interventions require the system to provide supplemental education services for students not performing with the typically applied core curriculum. Those interventions are especially important for at-risk children. Targeted services early on prevent reading difficulties that are far more serious and costly to correct if the system waits to respond (Neuman, 2007). RTI's premise is that children can make progress if they receive help for a substantial length of time each day, one-to-one or in a small group, with a highly trained professional.

Assessment Validity and Data Collection

Another category of research relates to the standardized measures that are used to determine if a student has responded to the intervention. Determining whether a child has a learning disability as measured by his/her response on an assessment requires that schools use a psychometrically adequate tool for decision-making validity. "Measures need to be correctly selected and accurate, and, when interpreted by teams, they need to link children to the most promising instructional or intervention alternatives" (Barnett, 2007, p. 108). Using ongoing progress monitoring data is a tool of ongoing validity evidence and single case research examines how an individual responds to the "treatment" or intervention. Knowing the measurement validity and reliability to both target instruction to areas of non-responsiveness is critical to effective RTI implementation. Using standardized measures for progress monitoring students helps

instructors make adjustments to the treatment depending upon how students respond along the way.

Ongoing data collection and analysis is another facet leaders must be prepared to organize within the system. Specifically, teachers who use formative data to guide instruction “generated instruction plans that were statistically significantly more varied and more responsive to individuals’ learning needs. More importantly, student achievement was greater than those who lacked time-sensitive data on students’ strengths and challenges with effect sizes ranging from .65 to 1.23 standard deviations” (Howell, 2008, p. 59). Principal leaders must expect ongoing formative assessment and lead staff to analyze the instructional or curricular changes that must be made as a result.

NCLB and Issues for Learning Disabled Students

Requiring students with disabilities to be proficient in reading, math, and science by 2014 presents a significant challenge. The expectation of 100% proficiency contradicts much of the purposes behind special education and learning disability identification. While the law should rightly expect learning disabled students to make progress, progress would currently not save a school from sanctions related to failure in adequate yearly progress. According to the Learning Disabilities Association of America, about 15 percent of the nation’s population—one in seven Americans—has some type of learning disability (Hardy, 2006). In the eyes of NCLB, identifying students as having a disability does not change the expectation that they should be proficient at the same time as their non-learning disabled peers. At some point, critics of NCLB argue that it is useless to assess children for a learning disability if it does not change the expectation. The assumption would be that “the state of the art in special

education is such that special educators know how to make students who are severely learning disabled into students who are proficient. Despite 40 years of good faith efforts...learning disabilities is still not an area that is understood and consistently effective methods for ameliorating such disabilities has not been found” (Wasta, 2006, p. 299). An unintended consequence of NCLB might be to stop identifying students as learning disabled so that those student scores are not counted against a school for adequate yearly progress (AYP). A more significant consequence might be that dedicated teachers who are unable to get a learning disabled student to proficiency might be demoralized by the impossibility of the task, or worse, demonized by the school for causing them to go on “watch”. “Participants at both the state and LEA levels expressed concern that some students with disabilities would not be able to meet the required standards despite the efforts of schools and teachers” (Nagle, Yunker, & Malmgren, 2006, p. 37). Even the proponents of high accountability for students with disabilities recognize that it is unobtainable for many children, and that schools will be subject to a high penalty such as turnaround or closure. The responsibility shifts to greater requirements for all teachers to provide high levels of instruction for all students, regardless of circumstance, whether it appears to be realistic or not.

NCLB and IDEIA require systemic changes throughout the school system. A primary factor in whether those changes will be handled successfully lies with the school principal. The servant leadership framework is an approach that might potentially support a systems change approach.

Theoretical Framework of Servant Leadership

Robert Greenleaf initiated the servant leadership theoretical framework. It is defined as the leader is servant first (Greenleaf, 1977). Over the years, several authors

have built upon this paradoxical concept and applied it to organizational and institutional leadership. Greenleaf's philosophical beliefs in part emerged from his experiences working at a large company. He experienced mostly hierarchical styles, where the management practices singlehandedly pulled and pushed members forward by the force of bureaucratic clout and political know-how (Sergiovanni, 1992). Greenleaf saw a new form of leadership emerging in response to a paradigm of command and control management where bosses maintained a *power over* status. He defined this shift as the "only authority deserving one's allegiance is that which is freely and knowingly granted by the led to the leader in response to, and in proportion to, the clearly evident servant stature of the leader" (Greenleaf, 1977, p. 10).

Servant and leader seem contradictory at first glance. How can one be a servant and leader? The framework emphasizes serving the members of the organization ahead of achieving profit. The positive development of efficacious subordinates defines a successful servant leader. Leaders serve through supporting the work of the group. Goals and vision develop from the conversation and consensus of the group, not through the mandate of leadership. Leaders help consensus form that is voluntary (Greenleaf, 1998). Through consensual decision-making, people work together in stronger communities to build more caring organizations. A colleague of Greenleaf names, "True leadership emerges from those whose primary motivation is a desire to help others" (Spears, 1995, p. 3). Employees, customers, and the community are the number one priority. There are four important characteristics or distinctions about servant leadership that arise in the literature. They are a focus on excellence, empowering others, emphasis on personal ethics, and a value of collective success.

Excellence Matters

One might infer that profit or performance takes a back seat to people feeling they have participation and positive feelings within their work. It seems that servant leadership could not exist in a high-stakes or for profit organization. To further clarify the servant leadership framework, performance is an expectation of all individuals in the organization because it leads to a better whole. By demonstrating less than optimal performance, the community suffers. The servant leader helps cultivate feelings of acceptance of the person, but is not willing to accept effort that causes others to work from a deficit (Rieser, 1988). Servant leadership maintains high standards for performance through cultivating the expertise and effort of the individuals because they have invested in serving collective interests before self. It would be unrealistic to say that every person would make wise choices for the organization. However, the servant leader operates from a stance that given the right tools and a powerful vision, people will want to do a good job and care for those being served as well as others in the system.

Empower Others, Not Do for Them

A further clarification of the theory posits that servant leadership does not mean doing things for others. While that understanding seems to fit under a definition of “servant”, the leader’s focus is actually to help each person become more autonomous and not be reliant on the daily directives from leadership in order to contribute to organizational effectiveness (Foster, 2000). The leader chooses to serve others by determining to make things better for people. Greenleaf frames it as, “Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants?” (Greenleaf, 1977, pp. 13-14).

To further emphasize the difference, the theoretical framework rests more closely with theology than it does with colonialism. Greenleaf writes about the servant as religious leader who follows in the footsteps of Jesus. The biblical references to Jesus as a servant described occasions where he denied power and let others choose what they felt would be the right path. In other instances, Jesus is seen as a model for how to behave in a self-less and giving way, putting other's needs before himself (Russell, 2003). This understanding is contrasted with the vision of "servant" as indentured servitude, where service becomes an expectation due to a hierarchical, superior position. In this context, servant implies doing as told to fulfill the comfort or command of a master. This definition would be contrary to the "servant leadership" framework where hierarchies of power are not emphasized.

Derived from Personal Ethics

A key concept that differentiates servant leadership from transactional and transformational leadership lies in the ethics of the leader. A subtle point emerges within the literature that it is not merely the act of serving in the best interest of others that defines a servant leader, but rather it is an innate desire to do so (Boyum, 2008). This implies that an ethical and moral disposition toward helping other individuals to lead becomes the priority, not self-ascension toward greater leadership heights. Leader ego and positional satisfaction are not the driving forces within the servant leadership framework. This might seem contrary to popular beliefs that leaders step on the little guy as they climb the ladder of success. Servant leadership describes a symbiosis between leader and follower where through the act of serving together, one another is raised to a "higher level of morality and motivation" (Boyum, 2008, p. 2).

In an analysis of sub-Saharan African leaders, many of them were characterized as being thoroughly despotic and hierarchical, and regularly infringed on people's rights, thereby initiating greater civil conflicts in their region. The author reasons that this occurs because these leaders see governing people as an investment where they expect huge personal and financial returns. "The sheep's survival and welfare aren't the leader's preoccupation" (Kumuyi, 2007, p. 19). The servant leadership framework supports leaders who value the survival and welfare of the flock as their moral purpose. Examples of successful African leaders in Botswana and Mauritius demonstrated self-less leadership and were deeply rooted in a desire to help others. The importance of ethics as the foundation for servant leadership cannot be misinterpreted. Organizations or systems which espouse servant leadership principles and then describe how employees are "trained" in this model fail to recognize that the internally derived intentions and ethical predispositions are what actually make an organization function through servant leadership.

Collectivistic Rather Than Individualistic

Greenleaf was partially inspired to write about servant leadership from his own Quaker upbringing which emphasized community and commitment (Crippen, 2004). Leadership effectiveness is preceded by relational effectiveness. Building trust amongst individuals within the system helps put the service of others before self. Understanding a person's story, background, aspirations, and interests creates understanding of motives, values, and dispositions that demonstrate an interest and investment in the collective. In order for this system of trust to develop, the group must have confidence in the "leader's competence and values. Further, people's confidence is strengthened by their belief that

the leader makes judgments on the basis of competence and values, rather than self-interest” (Sergiovanni, 2007, p. 51). People will respond positively to the leader and develop a collective commitment to shared values because the leader has demonstrated service for the greater community, not in response to a mandate or singular interest. The collective investment comes through having a shared ideal that each person in the organization can take a passionate responsibility for seeing through to fruition.

Organizational change author, Michael Fullan, describes that companies who look for ideas with a higher calling can more effectively bring people together because it reaches a person’s need for personal development and fulfillment (2008). All leaders face the challenge of bringing individuals together to fulfill a collective purpose. Forming new ideas and challenging the status quo is most effective when it is a communal activity. Creativity flourishes when leaders seek to connect people to ideas and to a feeling of interdependence. People retreat to self-interests and individualistic concerns when the purpose is not inspiring or only serves to fulfill the command of the leader (Harris, 2009). Going back to the relationship of Jesus to servant leadership, trust developed for Jesus to lead because he demonstrated a willingness to serve humankind out of a personal imperative and commitment. The leader that models “service above self” inspires others to respond in a similar way.

Application of Servant Leadership in Education and Non-profit

Schools are not businesses. Leadership principles and paradigms from corporations and businesses surface when discussions turn to an old argument that schools should be run more like businesses. There are many interpretations for what this might mean. One instance could be accountability for results, translated in the business world as profit. An application of this thinking might be that as taxpayer dollars are

invested in schools, there should be a return on that investment. Few educators would disagree that schools should be accountable for their results and be expected to support students achieving literacy and math skills. A careful consideration is to understand that schools which operate in democratic societies are unique entities. They are no less responsible to the citizens/investors, but the same principles that might lead to successful companies might not produce successful schools.

Schools present models of society. Educators take care to model a way of interacting that will produce positive developmental growth. Important goals within a democratic society are “to develop students who can learn to think reflectively, function at high stages of moral reasoning, and be autonomous decision makers” (Crippen, 2005, p. 3). It would make sense that teaching democratic ideals would require schools to model autonomy, moral reasoning, and reflective practices. Servant leadership aligns and supports a system of educational management where adults can behave and interact in much of the ways we would hope children could someday respond after they have left the schoolhouse. When parents and teachers are pushed to define excellent schools, the descriptors go beyond basic skill learning and academic competence. Bigger wishes include a love of learning, critical thinking and problem-solving, and interpersonal competence. Schools are responsible for teaching habits of self-discipline, responsibility, compassion, and curiosity. Our society does not require a slew of trained workers, but people who can fully participate in all that society demands (Sergiovanni, 2007). There is much more to public schooling than demonstrating whether students are “in the black”, such as businesses might use to define success. An educated, democratic citizenry is much more difficult to quantify. However, one certainly recognizes the absence of it.

There are five servant leadership characteristics most relevant for schools and non-profits to develop a system which models democratic ideals. Those characteristics are empowerment, purposing, stewardship, mentoring/teaching, and a community of learners.

Empowerment

Creating conditions where those served become more autonomous can be applied to the teachers, parents, and children associated with a school. When goals are clearly named and there is a collective commitment, these outcomes inspire and drive people to see them through. In tandem, a tight-loose structure emerges. The goals and ways of measuring them are tightly defined; however, the decisions about how to achieve them are largely left to the purposeful peer interactions within the system (Fullan, 2008). On the part of school leaders, this requires a high level of trust for all people involved in the organization. Micromanagement and controlling behaviors limit the collective ability to be inspired and creative. Collective contributions will cease if those decisions are ultimately dismissed or disrespected by the leadership. “Constituents neither perform at their best nor stick around for very long if their leader makes them feel weak, dependent, or alienated” (Kouzes, 2001, p. 72). At the center of empowerment lies individual efficacy. When a leader helps each person feel stronger and more capable of reaching the goal, then each party feels more in control of the outcome. A sense of personal and professional motivation arises from knowing that your work can have a positive contribution to the success of a child.

Purposing

Pursuing a task that contributes to the greater good defines the general principle of purposing. Many authors have described this as a driving force which inspires leaders to relentlessly pursue a goal despite tremendous odds. The bestseller on organizational leadership and performance, *Good to Great*, names this concept as a humanistic performance criterion (Collins, 2001). Fullan further names this as the involvement of everyone in an organization in meaningful pursuits that transcend the bottom line, essentially a moral purpose (2001). In schools and non-profits, it is relatively easy to name the greater good that the organization works toward. For schools, teachers might name an educated and responsible citizenry as the moral imperative which puts them back in front of thirty first graders each morning. Making a moral connection stimulates empowerment, ownership, and commitment to the hard work (Sergiovanni, 1996). Whereas schools rarely offer extrinsic rewards for accomplishing goals, reinforcing notions of a psychological fulfillment over individualistic motivators produces a collective commitment to the educational growth and development of children.

Stewardship

The connection between servant leadership and stewardship to public education is an obvious relationship. Statute names this connection as *in loco parentis* or in place of a parent, thereby, giving educators the capacity to act on behalf of a child or student. At the definition level, stewardship is taking care of something on another's behalf. Public schools and institutions have been granted stewardship by the citizenry. The community trusts that members of the public institution will deliver on its responsibilities to support the growth and well-being of what they have agreed will be their responsibility.

Stewardship is the willingness to be accountable for the well-being of the larger organization by operating in service, rather than in control, of those around us. One of the principles of stewardship is that no one should be able to make a living simply planning, watching, controlling or evaluating the actions of others (Block, 1993). Superintendents, principals, and other administrators often fall into a pattern of management where systems of planning and checking constitute the bulk of the day.

As greater accountability systems clamp down on K-12 institutions, the propensity to control in order to produce results is an ongoing struggle. This creates acts of compliance, rather than collective commitments to great visions and dreams for an organization. Stewardship at the highest level is driven by internal commitments to higher levels of goodness, effort, and accountability to the citizenry (Sergiovanni, 1996). Servant leaders strive to find words and deeds which persuade one another to act in responsible ways because it serves a greater good, not a master.

Mentoring and Teaching

The daily interaction between teachers and students constitutes ongoing efforts to grow and develop one another in positive ways. The student might test the teacher's patience on a daily basis. In order to find strategies to manage this, the teacher seeks out a trusted colleague for advice. This informal act constitutes a common practice of mentoring. The growth and development of students rests within teachers' daily actions. Teachers' primary mission is to serve the children so they can function fully in life. Daily routines within the schoolhouse embody servant leadership principles. A key servant leadership quality is a sense of engagement and responsibility to those they ultimately serve (Foster, 2000). As described in a theoretical study, mentoring became

the cornerstone for a program to develop community youth leaders. The adolescents chose a community project and were guided along the way by an adult advisor. The advisor was carefully selected to participate in the program based upon his/her servant leader philosophy. The deliberate psychological education toward servant leadership resulted in greater community responsibility for the adolescents (Grothaus, 2004). The commitment to become an educator or mentor serves the heart. Knowing that one's work nurtures the growth and development of another is the embodiment of servant leadership.

Community of Learners

“Imagination, creativity, and ingenuity can be used to solve work problems by a large number of employees” (Fullan, 2008, p. 22). Servant leadership responds to the growth and development needs of the teachers and students. Throughout the literature, principles of bottom-up created solutions are presented. While there is some discussion whether entirely bottom-up solutions are effective, creativity is allowed to flourish where leadership is distributed and expected. In reality, many decisions are made at the upper levels and handed down throughout the system to be implemented. The day-to-day practices of shared leadership would then involve the community to create plans or solutions to address the mandate. In organizations with shared leadership, a high level of trust exists. Because trust is high, problems are presented to smaller groups and solutions are generated within those groups. When interdependent communities of learners exist, solutions are more likely to address a common good instead of a narrow interest. By leaders modeling an act of trust, people are more likely to respond in trustful ways.

In summary, the servant leader is continually open to learning which is often generated by the groups closest to the level of daily implementation. Adapting to change

is more a function of crafting the community than establishing new goals, new learning, and better control. Creating this interdependent community of learners is a result of effective peer interactions within a collective purpose. Kouzes and Posner term this “positive interdependence” (2001). Goleman defines this as an *open loop*- our reliance on connections with other people for our own emotional stability (2002). Effective leaders know how to get people connected to one another in order to build strong communities who could adapt more nimbly in changing environments. In this type of culture, people leave their self-interest at the door and show up to learn from one another.

Can a servant leader persuade others to behave in a manner of service to the common good? Indeed, the answer is yes when the leader believes that at the heart of his or her employees they can be compelled to service above self. Again, the conceptual underpinning from servant leadership is that compelling people within an educational or non-profit organization is about greater autonomy and trust, not service to mandates. When people are free to make decisions, then it is more justifiable to hold them to high-accountability standards.

Principal Leadership in Systemic Change

The final category of research examines the systemic response to implementing an RTI model within a K-12 system. The scope of this research study focuses on the systemic implications for RTI implementation and how the school principal can effectively lead the changes. Current research on leading through systemic changes and effective school practices related to student achievement can be applied to understand effective practices within the RTI policy.

Administrative leadership overrides nearly every system factor for successful implementation of RTI. The implementation of RTI requires significant changes for staff, so the leadership must be able to define the non-negotiables as well as areas of flexibility. Principals and district level personnel will need to be involved in “orchestrating assessment efforts, supervising the fidelity of instructional practices and coordinating group interactions” (Putnam, 2008, p. 2). Leadership actions might include a systematic approach to universal screening and progress monitoring as well as an organized reading intervention program.

According to Galvin’s report for the Mid-continent Research for Education and Learning (McREL), the most overriding aspect of RTI is the systematic application of a formative assessment system (Galvin, 2007). For leadership at the state and district levels, they will need to consider the impact of new learning for teachers and pre-service teachers. Possible policy issues will be the “integration of funding streams from special and general education sources, reorganizing working units and departments within agencies, and promoting closer working relationships between separate work groups” (Galvin, 2007, p. 3). Galvin further describes how school leadership will need to find

ways to hold teachers responsible for student learning and be prepared to redefine job descriptions to provide necessary interventions. Principals must dissect the human and structural changes that will be required to implement RTI policy.

Integral to RTI is the recognition that it is a systemic model which must be seamlessly integrated and singularly focused on the same outcome: to ensure that every student learns at high levels. School leaders must examine the system and all of its parts to be aligned for high levels of achievement. A style of modeling the way or servant leadership is emphasized for the principal:

If a school's PRTI is to be effective, especially with students needing intensive help, the principal must be the leader of the process, the 'head learner'. If the principal completely delegates to others his or her responsibility to oversee the pyramid of interventions-especially at the Tier 3 intensive level where needs are most severe-then teachers receive the message that the administration places a low priority on the process and does not view it as central to ensuring that all students learn (Buffum, 2009) (p. 145).

Becoming data leaders and defining clear measures for accountability and success further outline expectations for leaders within RTI.

RTI impacts a school system in a significant manner. Peter Senge describes that the view within positional leadership might obstruct a principal's ability to see structures that interrelate. "When people in organizations focus only on their position, they have little sense of responsibility for the results produced when all positions interact" (Senge, 1990, p. 19). Senge's viewpoint would seem to support principal involvement within the RTI system in order to truly understand the "structures that underlie complex situations, and for discerning high from low leverage change" (Senge, 1990, p. 69).

Skills and understandings related to measurement and student assessment validity are necessary prerequisites for a principal to be prepared for the data leadership involved in RTI. One source cites an example where the principal of the school administered common assessments in language arts and math every month (Reeves, 2004, p. 75). Being actively involved in defining levels of proficiency and collecting exemplary student work, defines the learning expectations for students and parents within a high-accountability system. Being able to recognize and name the standard of performance is crucial for data leaders. Being able to align the systems to achieve the standard is crucial for school leaders during high stakes reform.

A discussion of systemic change and reform is a large and complex topic. The scope of this section will study systemic changes as applied to educational environments and how a different response is needed from business environments. Peter Senge's *The Fifth Discipline* and Bolman and Deal's *Reframing Organizations* are the systemic change theories most relevant for educational systems that are presented in more depth. Both texts focus largely on the human aspects within systemic change, which is an important and relevant concern for most educational reforms. Reform might be seen as a retooling of structures; however, people create changes at the end of the day.

Systems Thinking

Knowing that school reform will produce constant, policy-driven mandates, recognizing different theories of systemic change are important areas of study. Educators must remember that "schools don't thrive when they are uprooted again and again to accommodate the latest educational innovation" (Tyack, 2006, p. 710). Finding

structures and principles which support gaining control over the range of complex issues has the potential to promote longevity and sanity for school administrators and teachers.

Systemic change can be defined as an approach to change that:

- recognizes the interrelationships and interdependencies among the **parts** of the educational system, with the consequence that desired changes in one part of the system are accompanied by changes in other parts that are necessary to reach an idealized vision of the **whole**, and
- recognizes the interrelationships and interdependencies between the educational system and its **community**, including parents, employers, social service agencies, religious organizations, and much more, with the consequence that all stakeholders are given active ownership of the change effort (Carr-Chellman, 1998, p. 371).

Much of systems thinking and systems theory names that changing one part of the system invariably changes the whole system. This demonstrates the understanding that schools have connections that respond to manipulations on one end. Any school principal would describe that changing the bell schedule is a complex, systemic action. Carr-Chellman's synthesis above on the principles of systemic change reinforce the point that the second aspect of community involvement presents a unique flavor for school reform that might not be considered in systems theory related to businesses. While an HVAC business has customers they need to respond to, few people would feel they could give advice to the HVAC repair person about how to solve problems with heating and cooling systems. As public entities, schools have a required level of responsiveness to community and parent expectations. Since most people spent thirteen years in compulsory education systems, they feel knowledgeable to decide how systems could function to educate children. The distinction is that principles of change and systemic reform need to be applied within context, accounting for different nuances in education that are not present in business.

Another layer of complexity to understand systemic change goes beyond the principle of interconnected parts. Recognizing the need to create connections between the people in an organization produces far more complexities than figuring out how to make the cogs of a mechanical system work more effectively. The humanistic aspect of resistance and a retreat to status quo cannot be overlooked when analyzing change processes.

“Shifting our approaches to organizational change, so that we are working with life's change dynamics, is a gradual process that requires high degrees of watchfulness, patience and generosity. No one is able to act in new ways just because they want to. Everyone gets yanked back to old ways of doing things, especially when we feel tense or confused” (Wheatley, 1999, p. 1).

The human resource aspect of schools presents unique change conversations because it is interwoven with political issues such as tenure, unions, rights, and contracts.

Understanding how humans best grow and adapt within changing environments are important areas of study for leaders supporting educational reform. To begin, creating the conditions for a learning environment help support people through shifts before they retreat back to the status quo. Peter Senge, a predominant author for leading systemic change within educational environments, describes principles and processes for shifting an organization into a learning community.

The Fifth Discipline

Peter Senge's work appears frequently throughout the literature on systemic change. His premise is that the end result of successful change becomes a learning organization. Within a learning organization, people are continually expanding their capacity to create the results they truly desire. At the end of the day, the organization becomes a place where people are continually learning how to learn together (Senge,

1990). Senge's text, *The Fifth Discipline*, names five disciplines that work as an ensemble, creating manageable methods for initiating change. The five disciplines are personal mastery, mental models, building shared vision, team learning, and systems thinking.

Personal Mastery

Craftsmanship, efficacy, or excellence lies on the surface of personal mastery. “Personal mastery is the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively” (Senge, 1990, p. 7). Each individual's quest for continual learning within an organization contributes to a spirit of responsiveness to change. To continually develop personal mastery, Senge encourages people to connect their learning with purpose. Rather than coping with problems along the way, we need to remember why we started down this path in the first place. Consciously choosing a vision makes you a servant to yourself and sets your standards higher. Secondly, we must continually develop a better understanding of our current reality. “Creative tension” is created when we know our vision and have a clear picture of where we are. The distance between the two sparks us to seek resolution between the ends. Continual learning makes us aware of our growth areas and how we can develop more fully committed lives. Practicing the discipline of personal mastery builds our capacity to see the interdependencies between actions and our reality, expanding our knowledge of systems thinking.

Mental Models

In simple terms, mental models are the ingrained assumptions we have about the world. A new approach might never be adopted because it cannot get past an existing mental model. Unfortunately, we regularly take in and remember information that reinforces our existing mental models. This continues to be a dangerous cycle since mental models shape how we act and what we see. Unfortunately, a deeply ingrained position about the world impedes learning. As mentioned previously, learning creates systems thinking. Practicing skills of reflection and inquiry open our eyes to the ways in which we view the world. “Balancing inquiry with advocacy” exposes our viewpoints with an explanation of the assumptions and reasoning that they are built upon (Senge, 1990). Uncovering when our mental models are built from single events, establishes an entry point for systems thinking. Process learning circles invite reflective study and practice authentic listening through “ordered sharing”. Through listening and dialoguing, mental models shift allowing systemic change thought to enter (Caine, 2006). Creating mental models that are established from long term patterns of change and the structures surrounding those patterns support integrating the whole experience, not just a single point. Starting by unpacking a few high leverage mental models creates disequilibrium and makes the system ready to learn.

Shared Vision

“Few, if any, forces in human affairs are as powerful as shared vision” (Senge, 1990, p. 206). A shared vision is different from an individual’s deep caring about a particular aspiration. It describes a desire to be connected in an important undertaking. Again, a learning organization cannot exist without a shared, long-term vision.

Establishing a truly shared vision arises from enrollment and commitment, but never from compliance. In some cases, a shared vision develops from compliance but it lacks energy, passion, and excitement. Being committed to a shared vision means acting like you truly want it, rather than accepting it. Shared visions also should be built on aspirations, not fear. Fear implies avoiding or escaping something we don't want to happen. This is a negative vision. A positive vision states an aspiration, implying a continual source of learning and growing. In connecting shared visions to systems thinking, naming what an organization aspires to become also uncovers the systems people have created to be in their current reality. Experiencing what occurs through decision-making within the current reality further shapes how existing actions might support or detract from achieving the shared vision. Helplessness diminishes when people recognize that they have the capacity to invoke real and meaningful changes in pursuit of a compelling vision of the future through personal contacts and informal networks.

Team Learning

Schools readily function in patterns for team learning. Committees, grade level teams, and professional development build an expectation for group decision-making and learning together. Team learning creates alignment, which creates direction. When a collective direction is identified, energies harmonize. When low-level alignment exists, more chaos is created even when people are empowered. Team learning is about aligning and creating capacity. Dialogue and discussion create conditions for team learning. It uncovers mental models and breaks down feelings of isolation during organizational change. Teams need opportunities to dialogue, using protocols that facilitate open and

trusting exchanges. This builds alignment while building understanding of one another in the team. Ideas are directed to the center, not attributed to a person-to-person dynamic. Relationships develop positively, mostly due to ideas being openly shared. This establishes deeper trust amongst colleagues in order to engage in difficult conversations that challenge assumptions and bring greater meaning to the whole.

Systems Thinking

“Most schools are drowning in events” (Senge, 2000, p. 77). The danger in schools is that many operate in a quick fix mode, where leaders and teachers move rapidly from one event to the next solving problems. Curriculum committees work within separate disciplines, stretching to see how the underlying parts relate. The result is piecemeal work, making changes to budgets, curriculum, and organizational structures without really changing the system. Learning to recognize patterns in human behavior, a frame within educational systems, presents opportunities for identifying leverage. Mental models most susceptible to influence are an opportunity for change. As leaders begin pressing that leverage point, a balancing act emerges between new insights and old paradigms. To ensure that the system continues to learn, educators would engage in single or double-loop learning. Through this process, schools would take action, reflect on what has been done, and apply new learning to another problem or situation.

Providing time for dialogue and conscious metacognition about personal choices that support or hinder change in practice, moves teachers into uncomfortable shifts in thinking that may not match an existing mental model. Organizations rarely engage in this type of learning, but it is the ability to self-question that “enables organizations to learn to learn” (Senge, 2000, p. 95). Building this reflective system contributes to

learning and creates energy for the people involved in the reform effort. The energy creates momentum to act upon new learning. As an open system, extensive energy is required to create shared vision and mental models across interrelated aspects of the educational environment. As a human organization, schools are open systems that create responses to changes within a diverse environment. Humans have a limited capacity to integrate new learning, so leadership must effectively manage the number of mandates that people will be asked to respond to. The more mandates a school must operate under, the more closed a school becomes (Betts, 1992). A closed system becomes more rigid, unitary, and individualistic. Recognizing and limiting the number of reforms and changes a system can undertake, establishes greater probability that a reform can truly transform educational practices within schools. Recognizing the scope of reforms or mandates unpacks the degree to which the system will have to respond in new ways. Looking through the “frames” within the educational system provides an opportunity to analyze the environmental conditions that will accelerate or halt change.

Reframing Organizations

While similar in principles to *The Fifth Discipline*, Bolman and Deal’s *Reframing Organizations* emphasizes the political and organizational aspects of reform. Senge postulated that systemic change can best be supported through creating a learning community; Bolman and Deal describe a slightly more transactional approach to systemic change. The principles center on helping people adjust their mental models into new frames of thinking. Specifically, the authors name how organizations can help address the human, political, structural, and symbolic frames. A section of *Reframing Organizations* is devoted to combining John Kotter’s principles on motivating useful

action within the four frames (Bolman & Deal, 2008). Kotter (2002) describes that systemic changes generally fail when organizations look mostly at reason and structure without recognizing aspects of learning, alignment, negotiation and loss.

Create a Sense of Urgency

Kotter's first stage of change is creating a sense of urgency. Empowering the system to respond immediately creates a sense of urgency. Leaders who can tell a compelling story about the effectiveness of the proposed reform model will build feelings of consensus for a need to change.

Working through reforms generally creates human resource and political implications. Immediately, a sense of urgency is created when a long-held practice must be dismissed within a given time frame as decided or mandated (Kotter, 2008). Stakeholders will begin feeling confused and frustrated and demand to know what the leadership plans to do in order to ease the transition. The period of ambiguity is a hard place to be. Leaders must have a time-bound implementation plan that they can execute. Ideally, stakeholders would be kept apprised of the completed steps in the plan to show that progress is being made. This input group will need to be involved in the planning and communication about the progress of implementation. The feedback loop is essential in naming the progress being made so the change appears imminent and staff is less likely to retreat to the old ways in hopes that the innovation will be abandoned.

Within the political frame, leadership should seek out expertise from other professionals. This inspires confidence that the change will be consistent with other practices and based on experience. In another aspect of the political frame is the inclusion of authority players within the organization. Top leadership in the organization

must be willing to draw a line in the sand and define non-negotiables for staff. At the same time, power structures shift or dissolve depending upon the change. Some would argue that a major shift in power should go to the individuals directly impacted by the change. Proponents of “user-design” suggest that a leader taking input from stakeholders does not empower decision-making for effective change. Politically, shifts in power dynamics must occur for systemic change efforts to proceed. Leaders must be careful to not interpret systemic changes as just changes for other people (Carr-Chellman & Almeida, 2006).

Guiding Team

Designating a guiding team or leadership group is Kotter’s next stage. A system cannot sustain too many ongoing task forces and committees at one time. From the political frame, credible and influential members would need to be on board. At the structural level, the leadership team would define coordination tasks and work to designate responsibilities within the group and parameters for interaction. Decisions about meeting frequency, agenda, focus, and communication would be initial items for discussion. Within the human resource frame, collaboration amongst the team would be essential. The team would need to have a high level of trust, transparency, and honesty. A possible step would be to use decision-making or discussion protocols that structure interactions allowing all voices to participate through effective reflection and feedback. Such “cognitive conflict” remains at a level of discussion that is intense, but does not become personal (Garmston, 1998). It allows a team to get to deep levels of discussion without anger or hurt feelings in the end. A leadership team must be able to take on complex issues and not be afraid to be honest in front of the administrator.

Uplifting Vision

An uplifting vision and strategy is the next stage of change (Bolman & Deal, 2008). Symbolically, a school must recognize and name when they have overcome difficulties and remember they have the strength and capacity to do it again. Recognizing the people who are deeply rooted in the organization as important catalysts for implementation recognizes the strength and history of the staff. The leadership team should be prepared to address the political frame as they move forward in defining strategies. Some issues will be a loss of autonomy, redefined work roles, changing or elimination of positions, and resource distribution. Involving affected stakeholder groups in the discussion and feedback loop will help the leadership group map out potential minefields as they build their strategies. Within the structural frame, a time-bound implementation plan will need to be developed so that with vision, action is defined and described.

Communicating Vision

Communication throughout the change process requires leadership to be at the forefront. Communicating the vision and strategy through words, deeds, and symbols is the next stage in Kotter's model (Bolman & Deal, 2008). Sometimes changes are symbolized through a burial of artifacts from the past or letting go of old practices. As the implementation plan is developed, identification of support structures throughout the initiative describes the resources that are available to assist with a transition. Within the political frame, open forums will help build alliances and defuse the opposition. As Fullan (2001) points out, it is important to listen to the opposition. The opposition will present a viewpoint that the leadership might not recognize. Holding meetings to ask for

feedback recognizes the political and human resource frame during reform efforts. The leadership team is one source of feedback that can help determine how to share the important deadlines, processes, new learning, and structural changes that might occur. Communicating data and evidence is another symbolic display to describe progress. Evaluation will determine if mid-course corrections are needed before other stages of the implementation plan are entered into blindly.

Remove Obstacles

Leadership has a responsibility to remove obstacles and empower people to move forward. When undergoing a systemic change, people might feel that they do not have the knowledge or skills to make the required shift. Providing time for high-quality training is a must in order for efficacy and capacity to begin to build. Change without the necessary resources to make structural or personnel decisions is frustrating.

Early Wins

Politically and symbolically, if the community has sacrificed a great deal for the reform, even the smallest victory has to be celebrated publicly (Bolman & Deal, 2008). Making the hard decisions about human resource and structural shifts will provide opportunities for early wins. When considering the implementation plan, consensus building would come first and structural and human resource decisions would come second. Naming the success stories gives people the courage to make big decisions that would move the system forward. Collins reminds leaders to “point out the tangible accomplishments-however incremental at first” (2001, p. 174). A school might be able to fit the implementation plan within their existing schema for a while, but if the returns are not recognized quickly the big decisions have to be made quickly with less input and

planning. This could create political repercussions if the open loop of decision-making were to be skirted. The “flywheel” creates momentum and staff would need less fervent communication of goals. Results keep the inertia moving forward as the culture shifts.

Keep Going

Bolman and Deal state that the political frame needs “revival meetings” at this stage in the change process (2008). Spending time motivating people is not a sure way to success. However, keeping the right people on the bus by naming and recognizing their accomplishments is a way to keep the momentum moving forward and establishing criteria for excellence through public ceremonies. Singling out individuals in an organization can be a controversial practice in schools. Since teams and groups typically work together to create success, Bolman and Deal’s revival meeting might reinforce collective instead of individual efforts.

New Culture

Kotter’s final stage of change involves defining a new culture to support new ways. The new culture requires greater collaboration which would indicate a shift in cultural perceptions. Symbolically, this stage will be a tough transition. Many staff members will celebrate the past as a time of independence, freedom, and autonomy. However, new structures must be created to support new ways of approaching the work.

Summary

K-12 public schools undergo continuous reforms. Some are legislatively mandated, while others originate from new curriculums, assessments, or research-based instructional strategies. Studying the changes within RTI helps understand the scope of the reform. By exploring RTI as a recent reform that has high stakes impacts throughout the system, other changes can be broken down in a similar manner. Using Bolman and Deal's principles for reframing organizations, Kotter's stages of changes, and Senge's systems thinking, reform efforts can be humane while creating stronger organizational cultures that are committed to producing results. While a top-down mandate can be seen as an intrusion into the daily functions of those closest to the work, it can also be an impetus to re-examine the function and goals of the organization for positive change. Leadership has a responsibility, to a certain degree, to find a way to make challenging reforms work within the organization. This study proposes that servant leadership is worthy of study in order for school principals to approach the change process in a thoughtful, humanistic manner.

CHAPTER THREE: METHODOLOGY

Rationale and Evidence for a Mixed Method Approach

The purpose of this study was to investigate the relationship between a leadership style and how it relates to systemic reform and student achievement. The nature of self-reported data and a small sample size required this study to collect both quantitative and qualitative data so that the quantitative findings could be explained and validated through principal's experiences and understandings. This influenced the decision to use a mixed-methods design for this study.

The mixed methods explanatory sequential design requires gathering data in two phases. First, a conscious choice was made to place greater emphasis on the quantitative data collection methods and to use the qualitative information in a secondary role in order to explain the results. This enabled the researcher to develop focus group questions for the second qualitative phase based upon the initial findings in phase one of the study. As the research questions were formed, a fixed and emergent design addressed the potential limitations to a solely quantitative study. The first reason for employing a mixed methods design was to offset the sample size limitations from the selected participant group. The second reason was to provide triangulation with the self-reported information from the quantitative data that was collected with a survey (Creswell & Plano Clark, 2011). Seeking further information that validates the findings and conclusions lends further credibility to the study and addresses its' weaknesses. Additionally, "the quantitative results can net general explanations for the relationships among variables,

but the more detailed understanding of what the statistical tests or effect sizes actually mean is lacking” (Creswell & Plano Clark, 2011, p. 9). The organization of this study is outlined in Figure 3.1

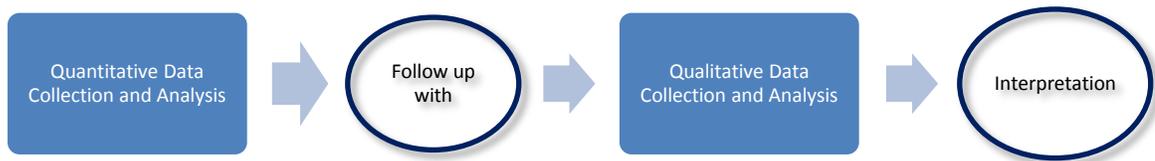


Figure 3.1 Explanatory sequential design (Creswell & Plano Clark, 2011).

Therefore, the mixed methods explanatory sequential design was selected to emphasize the postpositivist philosophy in the first phase and the constructivist philosophy in the second phase.

Quantitative Phase

The quantitative phase used a non-experimental associational approach to answer the first two research questions. The first research question investigated whether principal involvement in directly delivering RTI interventions and assessments resulted in a correlation with student reading achievement. There was no manipulation of the variables in the study, nor was there random assignment of participants into groups. Principal involvement was determined using a 1-5 scale, where participants were asked how frequently they delivered interventions or assessments. The group was controlled for the effects of extraneous experience in that students will not have chosen the group nor have knowledge of the intervention.

Within the first research question, the independent variable is defined as school principal involvement in delivering and assessing interventions. The associated dependent variable is defined as gains in reading achievement.

The second research question investigated whether a principal's score on the Servant Leadership (SL) Profile correlated with the school's overall implementation of RTI processes. For the second research question, the independent variable is defined as the principal's score on the SL. The dependent variable is defined as level of RTI implementation, as defined by the Thompson School District in Loveland, CO.

The first phase quantitative research questions, variables, levels, and statistics for this study are outlined in Table 1.

Table 1: *Description of quantitative research questions and variables*

Research Questions	Independent Variables	Levels	Dependent Variables	Levels	Statistic
1. Is there a correlation in reading achievement gain scores in elementary schools and the level of face-to-face principal involvement in delivering RTI interventions and assessments?	principal involvement in delivering interventions and assessments	0,1,2,3,4	DRA2 score	A – 50	PEARSON <i>r</i>
1. Is there a correlation between the principal's score on the Self-Assessment of Servant Leadership (SL) and the degree of the schools' implementation of systemic changes related to RTI policy?	SL score	1-7	RTI implementation score	1-96	PEARSON <i>r</i>

Qualitative Phase

The second phase of this study was a series of qualitative interviews with a focus group to explain the quantitative results. The rationale is that the “researcher places priority on the initial, quantitative phase and uses the subsequent qualitative phase to help explain the quantitative results” (Creswell & Plano Clark, 2011, p. 85). Creating a second qualitative strand enabled the researcher to explain significant/nonsignificant results and group differences. This was anticipated due to a small sample size and that some of the quantitative data were self-reported. The focus group participants and questions were selected based on the results and analysis from the quantitative phase.

Rationale for Mixed Method

The nature of this study is to understand the correlation between two variables and possible factors for the association. A mixed methods approach is appropriate in order to support both the determinist and constructivist philosophical assumptions to improve validity and strengthen the interpretation of results. “The overall purpose of this design is to use a qualitative strand to explain initial quantitative results” (Creswell & Plano Clark, 2011, p. 82). The first phase non-experimental, associative approach is limited in that a presumption of causality from the results cannot be made. A Pearson r was the statistic used in order to find associations between the variables.

The researcher used existing data that have been collected by Thompson R2-J School District since 2009, thus the study can be further described as ex-post-facto. As described in Figure 3.2, quantitative reading achievement data were collected in a pre-post assessment using the DRA-2. The resulting data is an overall gain score in reading achievement. The DRA-2 is a developmental reading assessment that establishes a grade level benchmark for reading achievement. In addition, the quantitative score of RTI level

of implementation will be collected using the Thompson School District's RTI Implementation Evaluation rubric. This is a number representing the school's level of RTI progress on desired indicators. Concurrent with this data collection is a survey given to elementary school principals asking them to identify the work they participate in related to progress monitoring or delivering interventions. The DRA2 data are the quantitative measurement of reading achievement at the elementary school level. The rubric and survey assesses the level of implementation for RTI and involvement of the school principal in the processes.

Participants and Sampling

The collected data are non-experimental in design and is taken from the researcher's district of employment. Due to the interest of Thompson School District in evaluating program implementation for RTI, the study participants are limited to the students and principals within the district. This would also be considered a convenience sample since it is taken from the researcher's place of employment. There is a small question whether the researcher would be able to influence the results, or whether principals would respond honestly to survey questions knowing that upper management might access these results. This is addressed through the IRB process and a release of data by school name will be kept confidential. The analysis occurred in an ex-post facto manner so influence is minimal if at all. The data were gathered from elementary schools' reading assessments from the beginning of the year and end of the year; therefore, the accessible population could also be the sample population. All 20 elementary schools from the Thompson R2-J School District in Loveland, CO are included in the study. The actual sample is all elementary school principals and students

in the district with valid scores on the survey, rubric, and DRA2. The theoretical population is defined as elementary school principals in states that have adopted RTI. The results of this study could be generalized to that population, given that the same national RTI policy would have similar parameters across states. This study could be replicated in other K-12 school districts. The ecological validity is high since results would be collected under natural settings, conditions, and procedures (Gliner, Morgan, & Leech, 2009, p. 127). The timing and length of treatment is representative of a typical academic school year.

Measures

There are four measures included in this study: 1) survey to define involvement in delivering interventions and assessments, 2) DRA2 student reading test scores, 3) SL assessment, and 4) RTI Implementation Evaluation scores. The final source of data was taken from a focus group of elementary principals. On the first research question, a simple two-question survey defined the degree of direct face-to-face principal involvement in administering RTI interventions and assessments. DRA2 student reading achievement data were collected as pre and post assessments. It requires this study to be ex-post facto due to the school year timelines for data collection. A Pearson r was used to analyze the quantitative research questions. This inferential statistic was selected in order to find associations between variables. The first question requires a within subjects design since the scores on the survey were matched with the reading achievement gain scores. For the second research question, the Self-Assessment of Servant Leadership (SL) was given to all elementary principals. The SL instrument is a 62 question survey using a 7 point Likert scale, ranging from (1) strongly disagree to (7) strongly agree. Page

and Wong (1998) developed the survey after extensive study on servant leadership. The RTI Implementation Evaluation rubric was developed by the Thompson School District RTI Leadership team, based upon indicators from the Colorado Department of Education. The rubric names seven areas of implementation with a rating of 1, 2, 3, or 4 for each area. A “1” represents the lowest level of adoption and a “4” represents exemplary RTI practices. A Pearson correlation assessed the single-factor association for the second research question.

Measurement Validity and Reliability

The DRA2 measures oral reading fluency and comprehension. Results indicate a high to moderate coefficient for internal consistency on both constructs, Oral Reading Fluency $\alpha=.54$ to $.79$ and Comprehension $\alpha=.64$ to $.85$ (Pearson Education, 2009, p. 30). Test-retest reliability indicated that the correlation coefficients between the first and second administration of the assessment were very high and ranged from $r = .93$ to $.99$ (p. 31). This is well above acceptable evidence for measurement validity, according to Cohen as cited in (Gliner, et al., 2009, p. 169). Kappa values for inter-rater reliability also indicate moderate to substantial levels of agreement ($\kappa= .57$, fluency and $\kappa=.65$, comprehension) (Pearson Education, 2009, p. 33). The overall conclusions about the DRA2’s measurement reliability indicate it has a “moderate to high internal consistency reliability, test-retest reliability, and inter-rater reliability” (p. 34). Content validity of the DRA2 was evaluated using teacher ratings on whether the DRA actually measured reading skills and development. Using a 1-5 rating system, practicing teachers were surveyed on several items related to content validity. Responses indicated an 83-97% agreement on content validity. Criterion validity was examined by comparing the DRA2

to four other reading assessments. Results indicated there were no significant differences at the 0.05 level between the DRA2 and the other four reading assessments (Pearson Education, 2009, p. 38). For construct validity, inter-item and subtest correlations were conducted. The oral reading fluency items are correlated among themselves (ranges from .33 to .81, $p < 0.05$) and reading comprehension items are highly correlated among themselves (ranges from 0.12 to 0.69, $p < 0.05$) (Pearson Education, 2009, p. 44). The results for measurement reliability and validity indicate the DRA2 is an appropriate measure for reading skills and development. The implementation rubric and survey instruments have not been empirically evaluated for reliability or validity. Rubric responses have a second layer of validity, due to an RTI leadership team member conducting interviews to determine the accuracy of responses. Clear descriptors within each category on the rubric provide some reliability across the team of interviewers.

The SL instrument has been through limited tests of reliability. Hamilton (1999) conducted a reliability test on the 24 item instrument, after it was reduced from 99 items. An alpha reliability score of .92 was reported for the SL (Taylor, 2002). After administering the SL instrument to the 20 principals in this study, an exploratory factor analysis was completed to evaluate the internal consistency reliability. To assess whether the data from the seven characteristics on the SL that were summed formed a reliable scale, Cronbach's alpha was computed. The alpha for the seven items was .74, which indicates that the items form a scale that has reasonable internal consistency reliability.

Data Collection

Prior to initiating data collection, permission was obtained from the district site and the participants. Participants were notified that they could be contacted for a follow up interview in the future. For the first measure, participants used a researcher developed survey to identify the principal's level of face-to-face involvement with students in RTI. The survey was given to all elementary principals in the district to complete independently and return. The data was collected on a 0-4 point scale defining: 1) regular delivery of research-based reading interventions, and 2) regular assessment of students' reading using progress monitoring probes. "Regular" is defined as weekly or biweekly. A score of "4" indicated regular involvement. This survey was used to answer the first research question. The second measure involved obtaining reading achievement data from the district site. Gain reading achievement quantitative data was collected using DRA2 scores at each school. The DRA is administered the week before school begins in August and again in May of the same academic year. For the third measure, quantitative responses on the Thompson School District RTI Implementation Evaluation rubric was used to answer research question (2). The implementation rubric was completed through an interview with each school's principal and RTI team. The interviews were conducted by members of the district RTI leadership team. Participants completed the rubric and survey in January of the study year. A single year of reading data were studied..

In the second qualitative phase, a focus group was conducted after the initial quantitative data were analyzed. Participants were purposely selected from the original group surveyed based upon the initial, quantitative results to explain the statistically

significant findings. Permission was obtained from each participant and the district site. IRB approval was obtained prior to conducting interviews and collecting data. As recommended in an explanatory design, a much smaller sample than the quantitative data collection was selected to participate in an interview (Creswell & Plano Clark, 2011). In a group of seven principals, participants discussed specific questions about their experiences and reactions to the initial findings. During the open-ended interviews, participants were asked questions to explain the quantitative results. This group was recorded and then transcribed for coding.

All information was stored electronically. The survey was administered as a paper-pencil evaluation. Survey information was coded with a unique identifier to protect the privacy of each participant. Each individual participant was granted access to the data in this study. Responses were monitored for completion.

Data Analysis

To study whether a school principal's face-to-face involvement, which will be servant leadership operationalized in this study, in delivering interventions and assessments impacts student achievement, systems reform, and RTI implementation, the following main research questions were investigated:

1. Is there an association between reading achievement gain scores in elementary schools and the level of direct principal involvement in delivering interventions and assessments?
2. Is there an association between elementary school principals and their levels of servant leadership and the degree of the schools' implementation of systemic changes related to RTI policy?

3. What are principals' perceptions about reading achievement scores and the direct involvement of the principal in delivering and assessing interventions?
4. What are principals' perceptions about a servant leadership approach and the implementation of a systemic reform, such as RTI?
5. How do the quantitative and qualitative data inform the value of servant leadership and implementation of RTI?

Quantitative

The quantitative analysis was conducted using the SPSS 19 statistical analysis program and "Discovering Statistics using SPSS" (Field, 2009). Descriptive numerical and graphical analyses were initially examined to determine the appropriate test and post-hoc comparisons. It was assumed that there were no violations of normality or homogeneity of variance, so the researcher selected the following statistics to answer the questions from above:

1. A Pearson correlation coefficient to determine the association between student reading achievement gains and the degree of principal involvement variables.

	O
E	Pearson <i>r</i>
E= Degree of principal involvement score O= Reading achievement gain score	

2. A Pearson correlation coefficient to determine the association between servant leadership RTI system implementation for a school.

	O
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E	Pearson <i>r</i>
E= SL score O= RTI implementation score	

Qualitative

The qualitative analysis was conducted through focus groups consisting of seven individuals. Text from the interviews was transcribed into a word processor for analysis. All responses were coded and entered into NVivo 9 computer assisted data analysis software. Responses were transformed by reducing them to themes and assigning a numeric value to the frequency of themes. Indicators were then analyzed deductively within the two constructs of “degree of principal involvement” and “servant-leadership”.

Mixed

The final phase of data analysis occurred by looking across the quantitative results and qualitative findings to make “meta-inferences” and draw conclusions (Creswell & Plano Clark, 2011, p. 237). Using the connected results from both phases, the researcher interpreted the data sets to answer the research questions and advance the goals of this study.

Summary

Identifying whether or not a child has a learning disability is a serious matter. Only after delivering research-based instruction and a child demonstrates a failure to respond, as determined by empirically validated assessments, would an LD label be appropriate. Response to Intervention (RTI) is the framework for systematically delivering instruction and assessments to determine a student’s ability to perform given the appropriate instruction. With RTI being a significant systemic change, principals

need to understand the aspects of the system that are impacted by the change. Some aspects of this reform are controversial and require significant oversight so that the fidelity of treatment for students and the subsequent assessment of learning can be validated.

Attempting to empirically validate principal leadership actions that promote systems change would contribute to the field of study. The reality is that principals will leverage the necessary changes within schools to adjust curriculum, instruction, and assessment for RTI. Naming specific actions that contribute to improved student achievement and systems change will provide a more specific direction for school leaders as they grapple with the requirements of RTI policy.

No Child Left Behind (NCLB) has put principal leaders in the crosshairs of high-stakes school reform. Attaining quantifiable student results becomes the focused goal for every school that receives federal funding. Failing to achieve those results means the school fails in the government's eyes. The potential of linking a leadership approach to student results would guide organizations to provide training or recommend specific approaches that would support RTI implementation, as leveraged by school leaders.

CHAPTER FOUR: FINDINGS

Introduction

This mixed methods study investigated the theory of servant leadership as applied to RTI reform. The two parts of this study were to examine whether the 1) principal's face-to-face involvement with students in delivering and assessing interventions relate to student reading achievement, and 2) the relationship between school principals' score on the servant leadership self-assessment (SL) and the schools' implementation of reforms required by RTI. Quantitative data from three sources are presented in the first section of this chapter, and then the results of the qualitative interviews, and finally an analysis of both sets combined are included in this chapter.

Participants and Instruments

The study participants were elementary school principals from Thompson School District in Loveland, CO. They completed two surveys in March 2011. The first survey asked them to identify their years of principal experience, years of experience at their current school, delivery of face-to-face reading interventions (using a scale of 0-4, with four being the highest frequency), and administration of progress monitoring or reading benchmark assessments (using a scale of 0-4, with four being the highest frequency). The same group of principals was given a second survey asking them to do a 62-item self-assessment of servant leadership using a 7-point Likert type scale. The Self-Assessment of Servant-Leadership (SL) was scored to define six positive qualities and the absence of one negative quality:

1. Developing and Empowering Others
2. Authentic Leadership
3. Open, Participatory Leadership
4. Inspiring Leadership
5. Visionary Leadership
6. Courageous Leadership
7. Power and Pride (negative quality)

The next set of quantitative data examined each school's growth in reading achievement using the Developmental Reading Assessment (DRA2). The final piece of quantitative data was collected from the Thompson School District RTI implementation rubric which defined various reforms expected, evaluated on a 96-point scale. Qualitative data were examined using the explanatory sequential approach. The responses to prompts were examined using the thematic coding structure. Support from the narrative findings was also considered.

Restatement of the Problem

With the 2014 deadline looming for 100% of students to be proficient in reading and math, reforming curriculum, instruction, and assessment continues to be a frantic push in K-12 public schools. Adding to this, RTI policy altered practices for general education and special education. The school principal is at the center of both policies. Leadership during reform must identify the crucial leverage points to encourage change while maintaining the mission and values of the organization. Studying how a leadership style can transition schools effectively during reform warrants further research. As states and districts prepare school leaders to undergo the latest reform, identifying factors that support leaders to work through issues with teachers, parents, and students has high impact.

One variable that has been studied is the relationship between the theoretical framework of servant leadership and school principals. In previous studies, student achievement, job satisfaction, and school climate were determined to be impacted by a school principal who followed servant leadership principles (Laub, 2010). Therefore, servant leadership might be a factor in implementing RTI effectively in public schools. The researcher's desire to study the concept of servant leadership arose from attempting to implement several hierarchical mandates that were systemic reforms. In questioning the best approach to manage school reform in a humanistic manner, the conceptual underpinning of servant leadership became the basis for this study. For the purposes of this study, servant leadership will be associated with a collaborative style rather than a hierarchical or transactional style.

Policy requirements from NCLB and IDEIA require systems realignment for all aspects of a K-12 public school. The structural, human, political, and symbolic frames are ultimately leveraged by school leadership. RTI policy impacted curriculum, instruction, and assessment in significant ways and came with no additional federal or state resources for implementation. Researching effective systemic change processes related to school leadership are imperative to managing external accountability forces within existing and diminishing resources. The central problem is that there are more mandates, no new resources, and the management of both are left to school-based leadership. A recently adopted Colorado policy, Senate Bill 191, has also required that 50% of a principal and teacher's evaluations are to be decided by student achievement results ("Concerning Ensuring Quality Instruction Through Educator Effectiveness," 2010). There is limited data defining whether a principal impacts student achievement.

There is even less information about which principal leadership practices might correlate with student achievement gains. This study attempts to add to the discussion about how systemic reforms are managed within public schools and whether the servant leadership style impacts student achievement.

Research Questions

To study whether a school principal's face-to-face involvement, which is servant leadership operationalized in this study, in delivering interventions and assessments impacts student achievement, systems reform, and RTI implementation, the following main research questions were investigated:

1. Is there an association between reading achievement gain scores in elementary schools and the level of direct principal involvement in delivering interventions and assessments?
2. Is there an association between elementary school principals and their levels of servant leadership and the degree of the schools' implementation of systemic changes related to RTI policy?
3. What are principals' perceptions about reading achievement scores and the direct involvement of the principal in delivering and assessing interventions?
4. What are principals' perceptions about a servant leadership approach and the implementation of a systemic reform, such as RTI?
5. How do the quantitative and qualitative data inform the value of servant leadership and implementation of RTI?

Organization and Order of Presentation of Results

This chapter is organized by research question. Questions 1 and 2 were evaluated using quantitative analysis (non-experimental approach). Main research questions 3 and 4 were evaluated using the mixed methods approach. Qualitative entries were transcribed from audio recordings taken during a focus group interview.

Research Question 1

Is there an association between reading achievement gain scores in elementary schools and the level of direct principal involvement in delivering interventions and assessments?

The association between reading achievement gain scores at each elementary school and the level of direct principal involvement were examined using a Pearson correlation coefficient r .

Test for Assumptions

The data were tested for normality and violations of assumptions for all observations. Tests for normality were conducted because a violation of normality changes the conclusions of the research study. Normality means that the distribution of the test is normally distributed with 0 mean, with 1 standard deviation and a symmetric bell shaped curve. To test the assumption of normality, the following measures and tests were applied: descriptive statistics for mean and standard deviation, skewness to test a normal distribution, and kurtosis to also test a normal distribution.

The small number of schools and school principals ($n=20$) likely had an impact on tests of normality. For principal delivery of interventions, skewness and kurtosis did not exceed 1, but a visual scan of the histogram showed a stronger distribution to the low end of the curve nearing a positive skew and indicating few high values. For principal

delivery of assessments, skewness approached +1.0 (.99) as did kurtosis ($\kappa=.80$).

However, neither reached the cutoff level of +/-2.0 so assumptions of normality were assumed.

Analysis of Statistics

Table 2 describes the means and standard deviations of principal involvement and DRA2 gain scores:

Table 2: *Means, standard deviations, and number for levels of principal involvement*

Levels of Principal Involvement	<i>M</i>	<i>SD</i>	<i>n</i>
Principal Delivery of Interventions	1.45	1.40	20
Principal Delivery of Assessments	1.30	1.10	20

The means and standard deviations appear to be normal, and clustered to the low end of frequency. The mean for principal delivery of interventions is slightly higher than delivery of assessments.

Table 3 describes the means, standard deviations, and number of DRA2 gain scores:

Table 3: Means, standard deviations, and number for DRA2 gain scores

DRA2 gain scores	<i>M</i>	<i>SD</i>	<i>n</i>
Grade 1 gain	9.75	3.07	109
Grade 2 gain	12.26	2.48	159
Grade 3 gain	11.39	2.85	131
Grade 4 gain	6.80	3.87	74
Grade 5 gain	6.33	4.57	45

There is a greater discrepancy in standard deviations as shown in this table (ranging from 2.48 to 4.57) possibly due to the range of *n* (159 to 45).

Table 4 describes the intercorrelations between principal involvement in assessments and interventions and DRA2 gain scores:

Table 4: Intercorrelations between principal involvement in assessments/interventions and DRA2 gain scores

	Principal del. of interventions	Principal del. of assessments	GR1 gain	GR2 gain	GR3 gain	GR4 gain	GR5 gain
Principal del. of interventions	1	.22	-.01	-.09	-.43	.18	.23
Principal del. of assessments	.22	1	.11	.29	.09	.18	.56
Grade 1 DRA gain	-.01	.11	1	.40	.48	-.24	.10
Grade 2 DRA gain	-.09	.28	.40	1	.14	.12	.59
Grade 3 DRA gain	-.43	.09	.48	.14	1	-.17	.34
Grade 4 DRA gain	.18	.18	-.24	.12	-.17	1	.83*
Grade 5 DRA gain	.23	.56	.10	.59	.34	.83*	1

* $p < .05$

In addressing research question 1, there is a large positive correlation between grade 5 DRA2 gain scores and principal delivery of assessments $r = .56$. The coefficient of determination for grade 5 DRA2 gain scores and principal delivery of assessments is $r^2 = .31$. This indicates a large predictive power, given that the variance explained accounts for 31%. There is a medium to large negative correlation between grade 3 DRA2 gain scores and principal delivery of interventions $r = -.43$. The coefficient of determination for grade 3 DRA2 gain scores and principal delivery of interventions is $r^2 = .18$. This indicates a medium to large predictive power, given that the variance explained accounts for 18%. However, neither correlation is significant at the $p < .05$ level, due in part to a small sample size. A significant intercorrelation is present in one area. A much larger than typical positive intercorrelation exists between grade 4 and grade 5 DRA2 gain scores $r = .83, p = .02$.

Research Question 2

Is there an association between elementary school principals and their levels of servant leadership and the degree of the schools' implementation of systemic changes related to RTI policy?

The association between elementary school principals and their levels on the seven factors of servant leadership (SL) and the degree of implementation of systemic changes related to RTI was examined using a Pearson correlation coefficient r .

Tests for Assumptions

The data were tested for normality and violations of assumptions for all observations. Tests for normality were conducted because a violation of normality changes the conclusions of the research study. Normality means that the distribution of the test is normally distributed with 0 mean, with 1 standard deviation and a symmetric bell shaped curve. To test the assumption of normality, the following measures and tests were applied: descriptive statistics for mean and standard deviation, skewness to test a normal distribution, and kurtosis to also test a normal distribution. On the first variable, servant leadership (SL) scores skewness exceeded -1.0 on one factor, Power and Pride (-1.37). This also happens to be the single, negative factor in the survey. There was one outlier that possibly created this result. On a few other factors, kurtosis exceeded +/-1.0 likely due to the small sample size ($n=20$). A visual scan of the data did not indicate any other concerns related to normality. A Cronbach's factor analysis was conducted on the SL instrument, and it came back within the acceptable range, $\alpha=.74$, suggesting internal consistency. Normality can be assumed for the SL survey since the values for skewness and kurtosis fall within acceptable ranges.

On the second variable, RTI implementation scores, assumptions of normality were not markedly violated. The data were slightly kurtotic at $\kappa = -1.41$. Additional visual scans of the data did not indicate any additional violations of normality. Normality was assumed since data were slightly kurtotic and standard deviations fell within an acceptable range from the mean.

Analysis of Statistics

Table 5 describes the means and standard deviations related to the seven factors of servant leadership, $n=20$:

Table 5: *Means and standard deviations for servant leadership factors*

Servant Leadership (SL)	<i>M</i>	<i>SD</i>
Developing and Empowering Others	5.92	.47
Power and Pride (negative)	6.11	.55
Authentic Leadership	6.10	.48
Open, Participatory Leadership	6.47	.27
Inspiring Leadership	5.60	.49
Visionary Leadership	5.72	.82
Courageous Leadership	6.17	.33

Table 5 demonstrates means ranging at the higher end of the 7 point Likert scale, 5.60 to 6.47. Standard deviations are low with the greatest distance occurring in Visionary Leadership.

Table 6 describes the means and standard deviations related to RTI implementation scores, $n=19$:

Table 6: Means and standard deviations for RTI implementation scores

	<i>M</i>	<i>SD</i>
RTI Implementation	72.49	7.7

Table 6 indicates that scores follow a normal distribution ranging from 62.75 to 86.14.

To determine a correlation between the principal’s scores on servant leadership and the degree of RTI implementation a Pearson correlation coefficient was run using SPSS 19. Table 7 describes the relationship between the two variables:

Table 7: Intercorrelations between servant leadership factors and RTI implementation

	Developing, Empowering Others	Power, Pride	Authentic Leadership	Open, Partic. Leadership	Inspiring Leadership	Visionary Leadership	Cour. Leadership	All factors	RTI Implem. Score
Developing, Empowering Others	1	.14	.32	.51	.60	.47	.53	.75	.14
Power, Pride	.14	1	.18	-.05	-.14	.32	.10	.41	-.01
Authentic Leadership	.32	.18	1	.36	.26	.38	.27	.61*	-.15
Open, Participatory Leadership	.51	-.05	.36	1	.43	.05	.25	.44	-.14
Inspiring Leadership	.61*	-.14	.26	.43	1	.55*	.64**	.71**	.37
Visionary Leadership	.46*	.32	.38	.05	.55*	1	.49*	.82**	.14
Courageous Leadership	.53*	.10	.27	.25	.64**	.49*	1	.69**	.28
All SL Factors	.75**	.41	.61**	.44	.71**	.82**	.69**	1	.13
RTI Implementation Score	.14	-.01	-.15	-.14	.37	.14	.28	.13	1

* $p < .05$

** $p < .01$

Table 6 presents the correlation coefficients for each principal’s SL factor, all factors, and the school’s RTI implementation score. Two correlations were found between the servant leadership score (SL) and the RTI implementation score. Inspiring Leadership and the RTI implementation score was significant, $r = .37$. This is a medium to large effect. The other area of significance is between Courageous Leadership and the RTI implementation score, $r = .28$. This indicates a medium effect. None were significant at

the $p < .05$ level. Significant intercorrelations were discovered between Courageous and Inspiring Leadership, $p < .01$. Other intercorrelations at the $p < .05$ level were found between Visionary Leadership and Inspiring Leadership; Developing and Empowering Others and Inspiring Leadership, Developing and Empowering Others and Visionary Leadership; and Developing and Empowering Others and Courageous Leadership.

Summary of Quantitative Results

There were no significant correlations found for research questions 1 and 2. For research question 1, some areas of further discussion are needed to describe a positive effect on Grade 5 DRA2 gain scores and principal delivery of assessments. While this is not at a significant level, it does indicate a positive direction and a medium effect size. On the other hand, further discussion is needed to clarify the slight negative correlation between Grade 3 DRA2 gain scores and principal delivery of interventions. For research question 2, there were no significant correlations between a principal's servant leadership score (SL) and the school's implementation of RTI score. In fact, discussion around a clear absence of correlation is needed.

Qualitative Results

A focus group was conducted with seven elementary school principals who participated in the initial quantitative surveys. The participants responded to several questions. The most commonly named themes were time, focus, and modeling the way. The most significant quotes are presented in this section organized by research question.

Research Question 3

What are principals' perceptions about reading achievement scores and the direct involvement of the principal in delivering and assessing interventions?

Research question 3 provided the explanatory connections to research question 1. The group was asked to explain what might have caused no correlation between principal delivery of assessments and interventions and RTI, and a slight negative correlation at one grade level. Time, focus, and modeling were the most frequent themes discussed in the focus group. Prior to discussing the quantitative results, the principals discussed why they had gotten involved in a hands-on manner during this reform. Some of the initial responses demonstrated principals believed they had a significant effect on reading achievement and felt their involvement facilitated reading achievement. Many believed that there would be a correlation between investing time in delivering interventions or assessments and reading achievement. As indicated from the survey, 17 out of 20 principals had participated in the delivery of assessment or interventions related to RTI. Participants responded about why they got involved:

“I wanted to understand and know what the data says and know the complexities. I would echo that. We needed more people also. We had some kids we were missing.”

“I would hope there would be a relationship. I put my effort in that, and I would hope to see a relationship.”

“I was thinking that if they see me giving an intervention to 1-2 students, does that ripple through the school in the level of importance that I am placing on those things?”

When participants were presented with the information that there was either no significant correlation or a slight negative correlation, the responses referenced time, skill, and participation of all people:

“Interesting look, how much does it hurt where you are designating your time?”

“The leader should be working on broadening and deepening the green level that is more impactful at the green level (classroom level).”

“A reform like RTI takes the involvement of everyone in your building. Can't get system of change unless everyone is part.”

“I struggled trying to find money, people, time, so I got involved in the interventions and assessments.”

“RTI in our building has been people dependent.”

Some of the reasons for getting involved were related to not having resources, wanting to model the way, and providing focus on fidelity. These themes are loosely related to the servant leadership concepts of Inspiring Leadership (modeling the way) and Courageous Leadership, where the principal contributes his/her time and position as an additional resource for implementing a systemic change that came with no additional funds.

Research Question 4

What are principals' perceptions about a servant leadership approach and the implementation of a systemic reform, such as RTI?

In responding to this research question, connections were made between aspects of Courageous Leadership and Inspiring Leadership, which were two areas of significance from the SL survey and RTI implementation score. The most common theme from the focus group referenced the principal as a change agent who built the capacity in others:

“My role is to be a change agent or cheerleader for a reform.”

“I help people understand why there is a need for change by asking questions.”

“I have to create a culture and climate that is ready and open for change.”

“As a principal, I have a role to play in challenging the status quo. There is a push in education to keep the status quo.”

The other consistent theme that emerged again related to modeling the way. Many principals indicated that they were heavily involved in the outset of RTI and referenced modeling as a way to initiate a systemic change:

“Being involved in the reform adds to your credibility.”

“Getting involved and modeling is an element of servant leadership. It is that piece that says ‘I met the needs of that one.’”

“It contributes to building the capacity of others if you are willing to walk a mile in their shoes.”

“Leadership is about changing a belief system. My actions and words model that we will do whatever it takes. That is the key part. There isn’t a specific recipe.”

“If you are directing the change, but staying out of it, the change is harder.”

As the discussion continued, many felt that they were less able to continue a high degree of servant leadership as RTI continued. They summarized that the demands of it were too great or it was replaced by the next reform:

“I don’t make it to all of the RTI student meetings. My expectation would be to attend all the meetings, but I can’t.”

“I know these are the right things to be involved in, but I can’t. We would have to be two or three people to be involved in all the things.”

“I have pulled back recently. My focus has shifted from RTI to Rigorous Curriculum Design.”

When the focus group was presented with the quantitative findings that there was no correlation between an overall servant leadership style and implementing RTI, their responses varied, but referenced that not a single leadership style could be applied to a complex reform:

“There is no one style that can be effective. We have to give some of the ‘we must do this.’”

“You can’t be a servant leader all of the time. You can’t be a dictatorial leader all the time.”

“You have to read the situation and find a style that fits, given the staff that you have.”

Another point of discussion came back to how RTI was being measured on the rubric and whether it was measuring the right things or if the principal’s perception of their implementation wasn’t realistic.

“What is on the rubric might not be what leads to achievement?”

“I question RTI longitudinally. Year to year, the same kids are identified as at risk. They are still not out of hot water, even though they have been in RTI for two years. We have two years of data. The same names keep coming up. Is it beyond what you are able to do or is it that the gap is so wide?”

As the conversation continued, a point was made that there are reform programs that do work. Yet, a factor impacting the results is that “we just do this program, and then this one, and then this one all together.” The group kept coming back to a point about how often we are asked to reform, and then none of the reforms occur at a deep level to make an impact.

Adding narrative responses provided an explanation for the underlying issues that were present in the quantitative findings. Time, focus, and motivating people were the most common themes that emerged in attempting to analyze the results of this study.

Even though the results showed a lack of significance, there was a medium effect size between the principal's leadership style to RTI. The qualitative conversation emphasized the human resource aspects in the system as more important than the current reform, supporting aspects of servant leadership research. The focus group supported the change leadership research in echoing how modeling the way was an important leverage point for the leader when approaching reform.

Research Question 5

How do the quantitative and qualitative data inform the value of servant leadership and implementation of RTI?

The combination of quantitative and qualitative data was an extremely important aspect of this study. At first, the small sample size was a primary reason necessitating a qualitative component. The researcher's initial predictions proved to be contrary to the actual findings. A surprising finding was that 85% of the principal group had been involved in administering assessments and interventions. This was a much higher percentage than anticipated. Targeting a discussion around this piece of data helped to uncover the underlying reasons for why this had occurred: a lack of resources and a desire to support the reform through modeling. A second area that the qualitative information helped to uncover was the surprising negative correlations within research question #1 and the unexpected results for RTI scores and reading gains. Again, the focus group offered supporting beliefs to help explain these results. Finally, the qualitative component brought the entire research study to an important conclusion. Principal leadership during a reform does not necessarily produce results. A principal's ability to lead people produces results.

Conclusion

An analysis of survey responses, DRA2 reading scores, and narratives was conducted to provide further understanding of the relationship of principal leadership relative to implementing a systemic reform such as Response to Intervention (RTI). Evaluations of servant leadership were collected from two surveys. The first survey operationalized the definition of servant leadership by collecting information on the level of direct principal involvement in the delivery of interventions and assessments related to RTI. Additional information was collected from the principal participants through a self-assessment of servant leadership. Data were collected on seven characteristics of servant leadership. Further quantitative data was collected from each principal's school regarding the level of implementation of systemic reforms within RTI, as assessed by a school district evaluation rubric. The final piece of quantitative data was DRA2 reading gain scores between August and May, representing a typical school year. Responses from a focus group discussion were collected after the initial data analysis on the quantitative results had been completed. The qualitative follow-up supported the mixed methods explanatory-sequential design. Questions for the focus group asked the participants from the original sample to provide insight regarding the quantitative results.

There were no significant correlations found for research questions 1 and 2, yet there were some medium to large effect sizes. For research question 1, some areas of further discussion are needed to describe a positive effect on Grade 5 DRA2 gain scores and principal delivery of assessments. Additionally, further discussion is needed to clarify the negative correlation between Grade 3 DRA2 gain scores and principal delivery of interventions. For research question 2, there were no significant correlations between

a principal's servant leadership score (SL) and the school's implementation of RTI score. In fact, discussion around a clear absence of correlation is needed. There were a few significant characteristics of servant leadership, Inspiring Leadership and Courageous Leadership, which related to the RTI implementation score. When the focus group discussions were analyzed, there are some clear explanations about the reasons for significant correlations or slight negative correlations. There are also some key reasons why Inspiring Leadership and Courageous Leadership emerged as having a moderate relationship to the RTI implementation score. Considerations and implications for this study are presented in the following chapter.

CHAPTER FIVE: DISCUSSION OF FINDINGS

Introduction

A summary of the study, overview of the problem, methodology, major findings for each research question, findings related to the literature, implications and recommendations for further research will be presented in this chapter.

Overview of the Problem

With the 2014 deadline looming for 100% of students to be proficient in reading and math, reforming curriculum, instruction, and assessment continues to be a frantic push in K-12 public schools. Adding to this, RTI policy altered practices for general education and special education. The school principal is at the center of both policies. Leadership during reform must identify the crucial leverage points to encourage change while maintaining the mission and values of the organization. Studying how a leadership style can transition schools effectively during reform warrants further research. As states and districts prepare school leaders to undergo the latest reform, identifying factors that support leaders to work through issues with teachers, parents, and students has high impact.

One variable that has been studied is the relationship between the theoretical framework of servant leadership and school principals. In previous studies, student achievement, job satisfaction, and school climate were determined to be impacted by a school principal who followed servant leadership principles (Laub, 2010). Therefore, servant leadership might be a factor in implementing RTI effectively in public schools.

The researcher's desire to study the concept of servant leadership arose from attempting to implement several hierarchical mandates that were systemic reforms. In questioning the best approach to manage school reform in a humanistic manner, the conceptual underpinning of servant leadership became the basis for this study. For the purposes of this study, servant leadership will be associated with a collaborative style rather than a hierarchical or transactional style.

Policy requirements from NCLB and IDEIA require systems realignment for all aspects of a K-12 public school. The structural, human, political, and symbolic frames are ultimately leveraged by school leadership. RTI policy impacted curriculum, instruction, and assessment in significant ways and came with no additional federal or state resources for implementation. Researching effective systemic change processes related to school leadership are imperative to managing external accountability forces within existing and diminishing resources. The central problem is that there are more mandates, no new resources, and the management of both are left to school-based leadership. A recently adopted Colorado policy, Senate Bill 191, has also required that 50% of a principal and teacher's evaluations are to be decided by student achievement results ("Concerning Ensuring Quality Instruction Through Educator Effectiveness," 2010). There is limited data defining whether a principal impacts student achievement. There is even less information about which principal leadership practices might correlate with student achievement gains. This study attempts to add to the discussion about how systemic reforms are managed within public schools and whether the servant leadership style impacts student achievement.

To study whether a school principal's face-to-face involvement, which is servant leadership operationalized in this study, in delivering interventions and assessments impacts student achievement, systems reform, and RTI implementation, the following main research questions were investigated:

1. Is there an association between reading achievement gain scores in elementary schools and the level of direct principal involvement in delivering interventions and assessments?
2. Is there an association between elementary school principals and their levels of servant leadership and the degree of the schools' implementation of systemic changes related to RTI policy?
3. What are principals' perceptions about reading achievement scores and the direct involvement of the principal in delivering and assessing interventions?
4. What are principals' perceptions about a servant leadership approach and the implementation of a systemic reform, such as RTI?
5. How do the quantitative and qualitative data inform the value of servant leadership and implementation of RTI?

Review of Methodology

The mixed methods explanatory sequential design required gathering data in two phases. First, a conscious choice was made to place greater emphasis on the quantitative data collection methods and to use the qualitative information in a secondary role in order to explain the results. This enabled the researcher to develop focus group questions for the second qualitative phase based upon the initial findings in phase one of the study. As

the research questions were formed, a fixed and emergent design addressed the potential limitations to a solely quantitative study. The first reason for employing a mixed methods design was to offset the sample size limitations from the selected participant group. The second reason was to provide triangulation with the self-reported information from the quantitative data that was collected with a survey (Creswell & Plano Clark, 2011). Seeking further information that validates the findings and conclusions lends further credibility to the study and addresses its' weaknesses. Additionally, "the quantitative results can net general explanations for the relationships among variables, but the more detailed understanding of what the statistical tests or effect sizes actually mean is lacking" (Creswell & Plano Clark, 2011, p. 9). Participants in this study completed two surveys about their level of servant leadership on a 7-point Likert-type scale and their level of involvement in the face-to-face delivery of assessments and interventions related to RTI. They also completed a rubric along with an evaluation team to determine the level of implementation of RTI within their schools. The final quantitative data were reading achievement scores for each school. Following the analysis of quantitative data, a group of seven participants were part of a focus group who provided further explanation and meaning to the quantitative results.

The quantitative phase used a non-experimental associational approach to answer the first two research questions. The first research question investigated whether principal involvement in directly delivering RTI interventions and assessments resulted in a correlation with student reading achievement. There was no manipulation of the variables in the study, nor was there random assignment of participants into groups. Principal involvement was determined using a 0-4 scale, where participants were asked

how frequently they delivered interventions or assessments. The group was controlled for the effects of extraneous experience in that students will not have chosen the group nor have knowledge of the intervention.

Within the first research question, the independent variable is defined as school principal involvement in delivering and assessing interventions. The associated dependent variable is defined as gains in reading achievement.

The second research question investigated whether a principal's score on the Servant Leadership (SL) Profile correlated with the school's overall implementation of RTI processes. For the second research question, the independent variable is defined as the principal's score on the SL. The dependent variable is defined as level of RTI implementation, as defined by the Thompson School District in Loveland, CO.

The second phase of this study was a series of qualitative interviews with a focus group to explain the quantitative results. The rationale is that the "researcher places priority on the initial, quantitative phase and uses the subsequent qualitative phase to help explain the quantitative results" (Creswell & Plano Clark, 2011, p. 85). Creating a second qualitative strand enabled the researcher to explain significant/nonsignificant results and group differences. This was anticipated due to a small sample size and that some of the quantitative data was self-reported; therefore, the mixed methods design addressed some of the possible reliability and validity issues. The focus group participants and questions were selected based on the results and analysis from the quantitative phase. A focus group was conducted after the quantitative data analysis had been completed. The focus group discussion was transcribed and coded using NVivo 9 to identify significant themes.

Major Findings: Research Question 1

Is there an association between reading achievement gain scores in elementary schools and the level of direct principal involvement in delivering interventions and assessments?

Quantitative analysis revealed that 17 out of 20 elementary school principals in Thompson were providing some level of direct face-to-face involvement in delivering interventions or assessments to students as part of RTI. The mean was slightly higher for delivery of interventions ($M=1.45$) than assessments ($M=1.30$). In correlating reading achievement gain scores with principal delivery of assessments/interventions, there was a negative correlation for principal delivery of interventions for three out of the five grade levels, Grade 3 gain scores having a negative effect at $r = -.43$. This was not significant at the $p < .05$ level. For principal delivery of assessments correlated to reading achievement gain scores, there were no significant effects. The highest degree of correlation occurred between principal delivery of assessments and Grade 5 gain scores at $r = .56$, but this was not significant at the $p < .05$ level.

It did come as a surprise that three out of five grade levels had a negative correlation with principal delivery of interventions. This is where the mixed methods played an important role. Asking the group of participants who had participated in this data set to consider possible explanations was helpful and enlightening. The following is a synopsis of the themes that emerged during the focus group:

Modeling the way, time, resources

Many believed that their involvement in either the interventions or assessments would lead to better implementation of RTI; therefore, leading to improved reading scores for students. The primary theme that emerged was that the leader should model

the way and show that he or she was willing to do whatever it took to put the reforms into place. A significant component of RTI is the regular progress monitoring (delivery of assessments) and providing students with research-based interventions (delivery of interventions). One of the explanations given for the negative correlations and no significant effects related to investing too much time in overseeing RTI, which was for a small group of students. This left less time for involvement in the tier 1 level of classroom instruction, specifically coaching and supporting the classrooms to support all students within the core instruction. Participants mentioned that becoming involved at this level was another issue competing for their time. They questioned whether they could actually commit enough time to the interventions and assessments in any way that would show a significant effect. By becoming involved in the technical aspects of the reform, it was an inefficient application of servant leadership. A final contributing factor was that RTI came with no new resources, so many leaders felt like they struggled to provide all of the people and tools that were needed to implement all of the required reforms.

Major Findings: Research Question 2

Is there an association between elementary school principals and their levels of servant leadership and the degree of the schools' implementation of systemic changes related to RTI policy?

The quantitative analysis showed that the group of elementary principals scored relatively consistently and on the high end of the self-assessment of servant leadership inventory (SL). Two correlations stood out between the servant leadership score (SL) and the RTI implementation score. Inspiring Leadership and the RTI implementation

score was approaching significance, $r=.37$. This is a medium to large effect. In reviewing the survey questions related to Inspiring Leadership, motivating a team to accomplish the vision by working together is a key aspect. This aspect relates to the position described by the focus group and the servant leadership research: how to effectively lead a group of people to accomplish a goal. Building effective collaboration correlated to implementing RTI. The other area of interest was between Courageous Leadership and the RTI implementation score, $r=.28$. This indicates a medium effect. The survey questions describe aspects of engendering trust and a willingness to “buck the system” if it is the right thing to do. Research supports that high levels of trust lead a system to respond quickly to changes. A leader who challenges the parameters within a hierarchical system potentially leads the reform more effectively. This could also indicate that principals would benefit from a greater degree of autonomy when asked to implement a systemic reform.

Other than the two aspects mentioned previously, no significant correlations were present in the results of servant leadership and RTI implementation. Given the premise that a collaborative and “softer” approach would lead to motivating people to implement changes, this outcome was unanticipated. In looking through the results of the SL survey, the standard deviation appears to be a factor. The group of elementary principals scored very similarly on the SL survey. In totaling all factors on the survey, the standard deviation was fairly small at $\sigma=.32$. There was very little variation from the mean, $M=6.01$. There was greater variation from the mean on the RTI implementation rubric, $M=72.49$ and $\sigma=7.7$. In sum, the principals were fairly similar in their self-assessment of servant leadership, but it did not necessarily correlate to whether they were able to move

a system through a reform such as RTI. Another factor could be the self-reported data on the SL survey. One might perceive himself or herself to be a servant leader when that might not be the case. A truer picture would be to confirm the SL survey score with teachers or staff from the principal's school. Given the absence of a correlation, the qualitative follow up with a focus group proved insightful.

Modeling the way, changing belief systems, changing approaches

The narratives provided more themes about the perceived relationship between implementing a reform and servant leadership. Again the participants referenced modeling the way as an important piece of keeping the culture and climate strong while implementing the changes. The group also referenced that the reform is about more than the leader. The real issue is whether or not the leader can get everyone involved and on board. The group referenced how implementing reforms requires people to change their belief systems. Completing the steps on the RTI implementation rubric would not necessarily indicate that people had changed their beliefs system about how all students respond to instruction. When it comes to a reform, the technical changes are not what matters but bringing about a new understanding actually creates improvements that are significant. The final layer of this conversation dealt with being able to move flexibly within leadership styles. A few of the participants felt like they needed to be dictatorial at times to get the last few people on board with the changes. Being a servant leader at all times might not necessarily be what the situation requires. Another principal agreed that the flexibility was important but having the confrontational conversations with people who were not following through was difficult. Many agreed that servant leadership worked up to a point when it came to changes and reform but using a

dictatorial approach came into play at some point when working with people in K-12 schools.

Findings Related to the Literature

Is there an association between reading achievement gain scores in elementary schools and the level of direct principal involvement in delivering interventions and assessments?

The quantitative data indicates that principal involvement in delivering the research-based interventions and assessments did not cause a significant correlation in reading achievement gains. There are aspects of this that are supported in the research and other aspects that are not supported. The Individuals with Disabilities Education Improvement Act (IDEIA) names RTI as a practice to close the gap in achievement between disabled and non-disabled students (U.S. Department of Education, 2004). In theory, the implementation of empirically-validated interventions and assessments should be a recipe for success in helping the most at-risk students overcome learning disabilities or recover lost academic skills at a greater rate. If principals were involved in this system and modeled the way for a school, the reading scores should increase and students would accelerate their growth. As presented in the literature review, there are some aspects of RTI that could account for no significant correlation. One possibility is that scientifically validated interventions and curriculum tend to be tightly structured, commercially available instructional programs which may or may not meet the needs of a particular student (Buffum, 2009). In reports from the participants, packaged programs were purchased for the schools and were largely implemented during the year the reading achievement data was collected. The focus group confirmed that fidelity to the materials

possibly led to students being placed in an inappropriate intervention due to adherence to expectations, lack of resources, or inconclusive data analysis.

On a systems level, students who struggle with a learning disability are by definition going to take more time and more intensive support to achieve. The assumption would be that “the state of the art in special education is such that special educators know how to make students who are severely learning disabled into students who are proficient. Despite 40 years of good faith efforts...learning disabilities is still not an area that is understood and consistently effective methods for ameliorating such disabilities has not been found” (Wasta, 2006, p. 299). In referencing this research, it would be expected that no significant gains in reading achievement would be found after one year of RTI implementation. Students who are behind will require more time and ongoing responsiveness to their individual needs.

Given the expectation from the literature that servant leadership focuses on excellence, empowering others, and a value of collective success, it stands to reason that leaders who exhibit servant leadership principles would create a system with measurable successes. A leader who contributes to the system improves organizational effectiveness (Foster, 2000). And in the act of leaders and followers serving together, one another is raised to a “higher level of morality and motivation” (Boyum, 2008, p. 2). When the leader gets directly involved in the system, people’s confidence is strengthened in the system by the belief that the leader makes judgments from informed competence (Sergiovanni, 2007). At the same time, a component of servant leadership is the empowerment of individuals. As mentioned previously, teacher judgment and feelings of efficacy were lost when their instructional strategies were replaced with “scientifically-

validated” curriculum as required by RTI. While the leader was directly involved in modeling the way through the technical aspects of RTI, the system itself was built on a lack of trust in teacher effectiveness. “Constituents neither perform at their best nor stick around for very long if their leader makes them feel weak, dependent, or alienated” (Kouzes, 2001, p. 72). The focus group named that effective leaders create an interdependent community of learners who are open to change. Adapting to change is more a function of crafting the community than establishing new goals, implementing new reforms, and imposing better control. Given a group of self-professed servant leader elementary principals, they should have been able to mobilize the community of teachers to achieve great results. As described in this study, that did not occur. How can it be that a system of empirically-validated materials and inspirational servant leaders did not achieve the results that RTI claims should be present? Is it possible the system might be responsible? The next section describes how systems challenges related to human resources, focus, and deep implementation are common issues reflected in the literature.

Systems Issues

During the focus group interviews, principals began each discussion with a high level of efficacy and a belief in their abilities to motivate and inspire staff to achieve great results. As professionals, they believed that anything less would be unacceptable. But as a lack of correlation was presented, the discussion turned to systems-related issues. The first systemic theme related to human resources. As described in the McREL report on RTI, school leaders must be prepared to redefine teacher job descriptions to provide the personnel to deliver the interventions (Galvin, 2007). Evidence from the survey indicated that 85% of the principals redefined their own job descriptions to become interventionists

and test-givers. In order to achieve the gains RTI promoted, schools needed to create small-group instruction and opportunities for one-on-one tutoring. At the outset, no additional personnel were provided to schools, so they were required to work with the staff they had. Schools attempted various models, but at some point nearly all came up short and many principals became part of the human resources to address the systems issue.

The literature on systemic change appears to support principal involvement. The leader must not delegate responsibility of the pyramid of interventions because the teachers receive the message that the administration places a low priority on the process (Buffum, 2009). Direct involvement helps the leader to understand the structures that are inherent in complex change situations (Senge, 1990). That being said, perhaps if principal involvement were a sustained process that could be tracked over time there might eventually be a correlation. In a high-stakes results-driven system, most administrators would be reluctant to continue a practice that demonstrated to have no significant effect even after a short period of implementation. As a system, schools rarely have the luxury of following Wheatley's (1999) advice on organizational change: remember that change is a gradual process and it requires a high degree of patience. Yet Senge (2000) describes that most schools pile on new events, living in a quick fix mode. With the 2014 deadline approaching for 100% proficiency from NCLB, sustained reforms will be the exception and not the norm. The focus group expressed the same sentiment that they were heavily involved in RTI at the outset, but now their time is directed toward the newest innovation.

Inability to Focus

A lack of focus could also be at fault in understanding why there was a lack of correlation. Tyack (2006) describes that schools don't thrive when they are continually uprooted to accommodate the latest educational innovation. Betts (1992) concurs that the more mandates heaped upon a school, the more closed it becomes and learning communities between professionals declines. RTI competed with a myriad of other initiatives, committees, and action plans. From the principal's perspective, overseeing RTI along with the other responsibilities in the system would not provide adequate time and reflection for deep implementation.

Is there an association between elementary school principals and their levels of servant leadership and the degree of the schools' implementation of systemic changes related to RTI policy?

While the quantitative aspects of this study did not reflect the same outcomes as the literature may have indicated, the focus group named principles from the literature that should have contributed to a relationship between a servant leadership style and implementation of a systemic reform. The literature describes that servant leaders pursue excellence and maintain high standards for performance (Rieser, 1988). Another finding from the literature explains that creativity and investment in a change flourish when leaders seek to connect people to ideas and to a feeling of interdependence. Challenging the status quo is most effective when it is a communal activity (Fullan, 2008). During the focus group interviews, principals referenced that as part of their position they were ultimately the ones who challenged the status quo among teachers and made certain reforms were followed. While the self-assessments of servant leadership indicated high

levels of Open, Participatory Leadership, the principals described needing to follow the expectations of the reform and sort people into being on the bus or challenging those who hung on to the status quo. In this case, the system did not create as much pressure for change as the authority of the leader.

As the results indicated, there was actually a slight negative correlation between Open, Participatory Leadership and RTI implementation. There are many reasons for this, but a possible systems issue is the looming deadline of 100% proficiency from NCLB. Leaders may not feel like they have the time to process, dialogue, and build collective capacity amongst all members of the staff or community. Principals who took more time to involve the staff and keep an open-loop system for feedback and refinement did not implement the reforms at the same level or as quickly. Schools that did move forward more quickly with the reforms possibly had a high level of RTI implementation but a lower level of Open, Participatory Leadership.

In order to have a system where servant leadership can truly flourish, a high degree of trust must be present for all people involved in the organization (Fullan, 2008). The focus group supported that trust and relationships as part of an overall culture and climate made it possible for systemic changes to occur. A servant leader might struggle with a reform due to a lack of trust amongst the people in the organization. For example, RTI depends on several staff working together to instruct, assess, and support a student who is falling behind. If there is a lack of trust in the system, rather than a collective and cohesive systems response, each individual takes a piece of responsibility and fails to make the connections or collaborative problem-solving that is required for RTI to function. As the focus group explained, they felt that student achievement gains occurred

not because of the reform but because of a group's ability to function as a cohesive unit around a singular goal. This point is supported in the literature that emphasizes that all positions need to interact to share responsibility for results (Senge, 1990) and (Carr-Chellman, 1998).

The literature also supports that a lack of resources to make structural or personnel changes is frustrating when a system is required to make reforms (Bolman & Deal, 2008). The focus group continually named this as a barrier to implementing RTI. Yet principals who felt they displayed Courageous and Inspiring Leadership seemed to make more progress in RTI implementation.

Unexpected Results and Additional Questions

While the direction of this study looked for positive correlations, a surprising outcome was not a lack of correlation but some unexpected slight negative correlations. Principal delivery of interventions had negative correlations to reading gains in three out of five grades. It is difficult to explain some of the complexities within this result, but it generates additional questions about factors that might be related to this outcome.

For the second research question, negative correlations were found between RTI implementation and Authentic Leadership and Open, Participatory Leadership. Possible explanations for the negative correlation were examined in findings related to the literature. A potential pitfall of implementing a reform in a high-stakes system with a deadline looming is that Open, Participatory Leadership suffers.

An additional question generated by the data collection was to determine if the RTI implementation scores correlated to gains in reading. This correlation was run using

SPSS 19 at the same time data analysis were completed on the two primary research questions. Table 8 presents the findings:

Table 8: *Correlations Between RTI Implementation and DRA2 Reading Gains, n=20*

	GR1 gain	GR2 gain	GR3 gain	GR4 gain	GR5 gain	RTI implementation score
Grade 1 DRA gain	1	.40	.48	-.24	.10	-.16
Grade 2 DRA gain	.40	1	.14	.12	.59	-.26
Grade 3 DRA gain	.48	.14	1	-.17	.34	-.43
Grade 4 DRA gain	-.24	.12	-.17	1	.83*	.05
Grade 5 DRA gain	.10	.59	.34	.83*	1	-.39
RTI Implementation Score	-.16	-.26	-.43	.06	-.39	1

* $p < .05$

As outlined in Table 8, four out of five grade levels' DRA2 reading gains negatively correlated to the RTI implementation rubric. In reviewing the literature, this is the opposite of what should have occurred. Using the explanatory sequential design, the focus group participants were queried about why they felt this phenomenon had occurred.

At this point in the conversation, the focus group participants had become a little more skeptical that any of their actions they might have perceived as being impactful were coming up to have no correlation or a negative correlation. Whereas there was a perceived significant impact at the outset of the conversation, their belief system turned to reasons why a correlation wasn't happening. In visiting this finding from the research, they analyzed reasons why RTI hadn't yet made the impact that it is intended to on reading scores:

“We are too wide spread in our focus. We ended up making a low impact across the whole building rather than making a high impact with a few.”

“We put too much emphasis on the interventions, and we have to put more emphasis on the tier 1.”

“By focusing on the research-based pull out intervention programs, we further fragmented the instruction for the kids that can handle it the least.”

“We are segmenting reading into little components.”

“When you try to squeeze kids into an intervention group, it still might not be the right fit. You end up teaching to the middle again.”

The challenges came back to a lack of resources and focus on meeting the children’s needs. There was a feeling that there were too many needs that required individualized attention, resulting in a fragmented system of reading development. The manner of using targeted, skill-based reading intervention programs when implementing RTI could potentially explain the negative correlations. In thinking about the developmental reading progression, students typically transition from the simple reading system (decoding and phonics) to a more complex system of reading (comprehension) between second and third grades. The largest negative correlation occurred in Grade 3 as indicated in Table 8. DRA2 measures the complex reading system more than the simple reading system. Additional questions exist around how shifting away from professional development to using prescriptive programs might impact a cohesive delivery of reading instruction necessary to build complex skills required for comprehension.

As a final summary to the focus group, the participants were queried to identify what the leverage points might be for a principal trying to implement a systemic reform. Given that a servant leadership approach, principal involvement, or RTI presented no correlation in this study, the researcher asked the group to define the variables.

In responding to this question, the two themes that emerged were motivating and inspiring people and building the capacity in people. In this section of the conversation, the leverage point of working with your human resources was of greater concern than implementing the technical aspects of the systemic reform.

“The first level is human resource. Who are they and what skills do they bring with them? It varies greatly from one person to the next.”

“If it was easy, we would all be doing it. If you do these five steps, you’d get this result. Why can’t I follow this model and get the same results? The human factor matters.”

“I have become very impatient. There is a culture in our profession that will not change. Federal, state government. It has to start coming from the top down.”

“Reforms won’t do anything for kids if you don’t have the belief system.”

Further emphasis on empowering people to change their beliefs and improve their capacity came up in the focus group. There was a discussion around schools being heavily invested in relationships and preserving relationships between people was valued in the system. The leader was challenged to maintain a strong culture and climate while continuing to challenge the status quo.

“I don’t think we can deeply implement a reform if the belief system of all of the people isn’t in place.”

“When scores are flat, sometimes you have to change the people. We haven’t gotten good at changing the people on the bus.”

“If it is working somewhere, I ought to be able to replicate it. What is it and how do I replicate it because my people are different?”

“Relationships are so important to people in the profession. They won’t ruffle feathers. They want to maintain relationships so quality suffers. Reform never solves the relationship issue.”

It was clear from the principal's perspective that the reforms would not necessarily lead to student achievement gains. Investing in research-based materials and assessments was not the leverage point. Investing in overall teacher effectiveness and cohesive, collaborative systems within the profession were the perceived variables that impacted results.

Conclusions

Response to Intervention (RTI) is the latest in a long line of educational reforms set into motion through state or federal policy. No Child Left Behind mandates that 100% of United States children will be proficient in reading and math by 2014. RTI practices were named by the state and federal government to close the gap for children who struggle with a learning disability in order that they might attain proficiency in those areas. The school principal is at the center of implementing the changes required by policy. Leadership during reform must identify the crucial leverage points to encourage change while maintaining the mission and values of the organization. As states and districts prepare school leaders to undergo the latest reform, identifying factors that support leaders to work through issues with teachers, parents, and students has high impact.

In studies, student achievement, job satisfaction, and school climate were determined to be impacted by a school principal who followed servant leadership principles (Laub, 2010). In questioning the best approach to manage school reform in a humanistic manner, the conceptual underpinning of servant leadership became the basis for this study. Because of the lack of studies focusing on the role of the principal in

implementing RTI, this study aimed to find a correlation between a specific approach and whether it would achieve the goals of NCLB.

The central problem continues to be that there are more mandates, no new resources, and the management of both is left to school-based leadership. A recently adopted Colorado policy, Senate Bill 191, has also required that 50% of a principal and teacher's evaluations are to be decided by student achievement results ("Concerning Ensuring Quality Instruction Through Educator Effectiveness," 2010). There is limited data defining whether a principal impacts student achievement. There is even less information about which principal leadership practices might correlate with student achievement gains.

The purpose of this study was to investigate and, subsequently, add to the discussion about how systemic reforms are managed within public schools and whether the servant leadership style impacts student achievement. The findings do not support that servant leadership has a relationship to implementation of systemic changes related to RTI. This study also found no relationship between servant leadership and reading growth. Finally, an unexpected result indicated that implementation of systemic reforms related to RTI did not result in reading growth. The quantitative data showed no significant relationships between any of the variables. Due to the small sample size, these results should be interpreted with caution. However, the school leaders' experiences and voices did support the literature on servant leadership and systemic change. They continually named the factors of time, modeling, focus, and inspiring people as factors which contribute to a system that achieves. This study suggests two things:

- 1) Programmatic reforms such as RTI do not necessarily lead to improved results. If a research-based reform can be sustained and implemented slowly over time with adequate resources and focus, it has the potential to make an impact on student achievement. Many reforms are abandoned after a short implementation period because they fail to produce results in a short amount of time. This is often due to a competition for scarce resources of time and money to effectively manage new reforms as well as existing initiatives.
- 2) People make systems function during change. Trust, relationships, inspiration, and courage determine whether the system will change. Open, participatory leadership helps refine the change over time by allowing a feedback process for the people closest to the daily work. A system which allows principals and teachers the capacity to give input and change processes provides the conditions for a successful reform.

These results can inform policy makers and leadership programs in the conditions that make systemic reforms humanistic and impactful for students. As Wasta (2006) explains, years of learning disability research was thrown out the window when RTI policy implied that there was no such thing as a learning disability; it was a lack of quality instruction that caused students to not meet proficiency. This policy put teachers and principals into a system where they were asked to overcome any and all deficits put before them with existing and dwindling resources. It stands to reason that Inspiring and Courageous Leadership are required in times like today.

This study has the potential to contribute to the development of leadership programs for school administrators to manage reforms given the current political climate

that holds teachers and principals ultimately responsible for student failures. Creating opportunities for school leaders to connect with one another in order to sustain momentum and commitment to the profession will be a crucial consideration for districts, state and local agencies.

Recommendations

Additional inquiry into the effects of RTI as an impactful reform that leads students to achieve proficiency, despite a disability, is necessary in order to generalize these results. This study is limited to one school district and its' group of elementary school principals. A more in-depth analysis of the factors contributing to students who started with a deficiency and then regained the skills to become proficient readers and mathematicians would contribute to the literature related to RTI and learning disability research.

Additional studies on reading interventions and professional development programs for improving instructional practices in teaching reading are needed to support districts who are investing scarce resources in a particular program. A comparison of investing in research-based materials compared to investing in more people to implement research-based practices would add to the discussion on effective RTI implementation.

It is necessary that researchers continue to study how schools respond to policy mandates. Retreating to the status quo seems inevitable if teachers and principals are not given the time, training, resources, and focus to implement the policy. Threats and more legislative hammers have become the response when districts are unable to meet the new mandates rather than more time and training.

Lastly, effective principal preparation programs and ongoing educational leadership development must address the changing political climate where principals must ensure that every teacher achieves highly effective status. This becomes critical for Colorado principals where 50% of their evaluation will be the “portfolio” or effectiveness of their licensed staff. Another component of the Teacher Effectiveness legislation is the inclusion of public surveys for the school principal ("Concerning Ensuring Quality Instruction Through Educator Effectiveness," 2010). The principal must ensure that each teacher achieves highly-effective status and accomplish it in a way that would build respect and appreciation from all constituents. Educational leaders not only must be inspirational and courageous, they had better wear a cape so people know that the person walking into the room also has super powers.

Benefits of Mixed Methods Design for this Research

The small sample size and lack of significant research around empirically-validated leadership practices for principals presented a challenge to finding a significant correlation between variables. The explanatory sequential design was a crucial process in beginning to connect results to the literature. Major themes emerged within the group that was referenced throughout the literature on servant leadership and systemic change. Given that the results were pointing toward a negative correlation in some cases, further understanding of this required the actual participants in the study to provide the possible explanations for why that might have occurred. Without the narratives, this study would not have revealed anything that could be substantiated in the literature or supported through experiences.

Concluding Remarks

The goal of this study was to add to the empirical research base on leadership approaches for school principals during systemic reform. At the onset, this study attempted to validate a practice that school principals were increasingly directly involved in the instruction and assessment of students. This phenomenon seemed to occur to a greater degree when RTI policy was enacted through state and federal legislation. This study revealed that servant leadership, whether self-assessed or operationalized, does not correlate to the quantitative variables of student reading growth or implementation of reforms. Quantitative analysis showed either no correlation or negative correlations to this practice.

Further analysis of the qualitative findings to identify conditions that allow reforms to be implemented in a productive or sustainable manner is necessary. These conditions further fragment leaders, teachers, and instructional programs for students. The results of this study pose an important point of discussion for leaders. While significant time and expense was allocated to implement RTI, it did not lead students to become better readers. Principals indicated that this reform caused them to shift their focus to a handful of systems and away from the overall instructional leadership responsibilities within the school. In this case, directly serving students was not an efficient manner to model the way. The principle of servant leadership appeared to be ineffectively applied. Modeling the way should lead to empowering others, not replacing their expertise or doing for someone. This method of leadership did not grow anyone else's effectiveness as a teacher or member of the system. As described in the qualitative findings, the principal shifted from lead learner to part-time paraprofessional.

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APPENDIX A – Permission to use the Self-Assessment of Servant Leadership (SL)

From: Don Page [page@twu.ca]
Sent: Monday, January 17, 2011 6:23 PM
To: Traci Gile
Subject: RE: Permission to use the Conceptual Framework for Measuring Servant Leadership

Hello Traci,

I am pleased to grant you permission to use the SL Self Assessment and the accompanying 360 degree instrument. I am attaching a couple of documents that may assist you in your work. If possible, I would like to see your results from using the instrument. You may be interested to know that the instrument has been used in over 100 dissertations on servant leadership. Best wishes.

From: Traci Gile [mailto:traci@mesanetworks.net]
Sent: Monday, January 17, 2011 3:40 PM
To: Don Page
Subject: Permission to use the Conceptual Framework for Measuring Servant Leadership

Dear Dr. Donald Page,

I am a doctoral student at Colorado State University and am currently completing my dissertation on servant leadership. I am requesting permission to use your self-assessment of servant leadership profile located at <http://www.twu.ca/academics/graduate/leadership/servant-leadership/servant-leadership-self-profile.pdf>

I noticed it was used in a dissertation I found on Digital Dissertations. The title of the dissertation was: Examination of Leadership Practices of Principals Identified as Servant Leaders by Timothy Taylor.

I have a similar study underway to examine leadership practices of elementary school principals during systemic changes mandated through legislative reform, specifically Response to Intervention (RTI).

The self-profile would be administered to a maximum of 40 principals in Northern Colorado. The results would be compiled and presented in my dissertation.

Please respond to my email address at traci@mesanetworks.net if you would grant me permission to use this instrument. Thank you!

Sincerely,

Traci Gile

Doctoral Student in Educational Leadership and Human Resource Studies

Colorado State University

APPENDIX B –Recruitment Script

February 19, 2011

Dear Participant,

My name is Traci Gile and I am a researcher from Colorado State University in the School of Education. I am conducting a research study on the servant leadership style and implementation of systemic reform related to RTI. An additional area of research is to determine if there is a correlation between active principal involvement in RTI and student achievement. The title of our project is *Principal Leadership in Response to Intervention (RTI): A Mixed Methods Study Examining a Servant Leadership Approach to Reform*. The Principal Investigator is Dr. Donna Cooner, School of Education and the Co-Principal Investigator is Traci Gile, School of Education. This research study is being conducted as part of a PhD dissertation.

We would like you to complete two surveys and potentially be contacted for a follow-up focus group with your peers. The survey will be given to you and completed during our regular scheduled monthly meeting in March. Participation in the survey will take approximately 20 minutes. If you were contacted for the focus group, participation would be approximately 30 minutes. Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty.

Your privacy and confidentiality will be maintained by the researcher through coding and password protected files on a computer. While there are no direct benefits to you, we hope to gain more knowledge on how a specific leadership style might relate to systemic reform and student achievement.

There are no known risks for participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

If you have any questions, please contact Traci Gile at traci@mesanetworks.net or Dr. Donna Cooner at (970) 491-7167. If you have any questions about your rights as a volunteer in this research, contact Janell Barker, Human Research Administrator, at 970-491-1655.

Sincerely,

Dr. Donna Cooner
Associate Professor

Traci Gile
Doctoral student

APPENDIX C –Consent Form

COLORADO STATE UNIVERSITY

INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

Title of Research: Principal Leadership in Response to Intervention (RTI): A Mixed Methods Study Examining a Servant Leadership Approach to Reform

Purpose of Research: The primary purpose of this research is to examine if there is a correlation between the servant leadership style and implementation of systemic reform related to RTI. An additional area of research is to determine if there is a correlation between active principal involvement in RTI and student achievement.

Investigator: Donna Cooner
100 Education Building (970-491-5292)
dcooner@cahs.colostate.edu

Before agreeing to participate in this research study, it is important that you read the following explanation of this study. This statement describes the purpose, procedures, benefits, risks, discomforts, and precautions of the program. Also described is your right to withdraw from the study at any time. No guarantees or assurances can be made as to the results of the study.

Explanation of Procedures

You are being asked to participate in a research project to investigate whether there is a correlation between servant leadership and systemic reform. Additionally, you will be asked if you participate in delivering face-to-face interventions or assessments to students to determine if there is a correlation between an operationalized example of servant leadership and student achievement. You will be asked to complete two surveys. One is a self-assessment of servant leadership. The second is a survey to define the level of face-to-face interaction you have with students in delivering interventions or assessments related to RTI. You may be contacted for a follow-up interview after the results have been analyzed.

For the purposes of this study, a servant leader will be operationalized as a principal who engages in face-to-face instruction with students on a regular basis. The self-assessment of servant-leadership is an additional method of defining servant leadership. Response to Intervention (RTI) is the identified practice for identifying whether children are learning

disabled, as defined by federal policy from the reauthorized Individuals with Disabilities Education Act. Systemic reform refers to the practices of revising or changing multiple aspects of a given system, such as human, political, structural, and symbolic frames.

Risks and Discomforts:

You will not be at physical or psychological risk and should experience no discomfort resulting from the research procedures. It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

Benefits:

There are no direct benefits by participating in this study, however, you may benefit from reflecting on your own approach to leadership by completing the survey. This research is also expected to benefit principals engaged in systemic reform.

Confidentiality:

All information gathered from this study will remain confidential. Your identity as a participant will not be disclosed to anyone but the principal investigator and all collected data will be stored in locked drawer or protected by password on a computer. Any references to your identity that would compromise your anonymity will be removed or disguised prior to the preparation of the research reports and publications.

PARTICIPATION:

Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled.

Your signature acknowledges that you have read the information stated and willingly sign this consent form. Your signature also acknowledges that you have received, on the date signed, a copy of this document containing 2 pages.

Please initial below indicating your consent to participate in the various aspects of this research study.

Surveys:

_____ Yes, I will complete two surveys on 1) a self-assessment of servant leadership, 2) a survey indicating my level of face-to-face involvement in delivering instruction or assessment related to RTI.

Focus Group:

You may be contacted to participate in a focus group. The focus group will occur within three months of completing the surveys. The focus group, and any other meetings, will be audio recorded.

_____ Yes, you may contact me to participate in a focus group of my peers to discuss the initial findings from this study.

Signature of Subject

Date

Subject name (printed)

Signature of Researcher

Date

7.	I am willing to accept other people's ideas, whenever they are better than my own.	1	2	3	4	5	6	7
8.	I promote tolerance, kindness, and honesty in the work place.	1	2	3	4	5	6	7
9.	I believe that as a leader I should be front and centre in every function in which I am involved.	1	2	3	4	5	6	7
10.	I create a climate of trust and openness to facilitate participation in decision making.	1	2	3	4	5	6	7
11.	I believe that leadership effectiveness is enhanced through empowering others.	1	2	3	4	5	6	7
12.	I want to build trust through honesty and empathy.	1	2	3	4	5	6	7
13.	I am able to bring out the best in others.	1	2	3	4	5	6	7
14.	I want to make sure that everyone follows orders without questioning my authority.	1	2	3	4	5	6	7
15.	I think that as a leader my name must be associated with every initiative.	1	2	3	4	5	6	7
16.	I consistently delegate responsibility to others and empower them to do their job.	1	2	3	4	5	6	7
17.	I seek to serve rather than be served.	1	2	3	4	5	6	7
18.	I believe that to be a strong leader, I need to have the power to do whatever I want without being questioned.	1	2	3	4	5	6	7
19.	I am able to inspire others with my enthusiasm and confidence in what can be accomplished.	1	2	3	4	5	6	7
20.	I am able to transform an ordinary group of individuals into a winning team.	1	2	3	4	5	6	7
21.	I try to remove all organizational barriers so that others can freely participate in decision-making.	1	2	3	4	5	6	7
22.	I devote a lot of energy to promoting trust, mutual understanding and team spirit.	1	2	3	4	5	6	7
23.	I derive a great deal of satisfaction in helping others succeed.	1	2	3	4	5	6	7
24.	I have the moral courage to do the right thing, even when it hurts me politically.	1	2	3	4	5	6	7

25.	I am able to rally people around me and inspire them to achieve a common goal.	1	2	3	4	5	6	7
26.	I am able to present a vision that is readily and enthusiastically embraced by others.	1	2	3	4	5	6	7
27.	I invest considerable time and energy in helping others overcome their weaknesses and develop their potential.	1	2	3	4	5	6	7
28.	I want to have the final say on everything, even in areas where I do not have the competence.	1	2	3	4	5	6	7
29.	I don't want to share power with others, because I fear that they may use it against me.	1	2	3	4	5	6	7
30.	I practice what I preach.	1	2	3	4	5	6	7
31.	I am willing to risk mistakes by empowering others to "carry the ball."	1	2	3	4	5	6	7
32.	I have the courage to assume full responsibility for my mistakes and acknowledge personal limitations.	1	2	3	4	5	6	7
33.	I have the courage and determination to do what is right in spite of difficulty or opposition.	1	2	3	4	5	6	7
34.	Whenever possible, I give credit to others.	1	2	3	4	5	6	7
35.	I am willing to share power and authority with others in the decision making process.	1	2	3	4	5	6	7
36.	I genuinely care about the welfare of people working for me.	1	2	3	4	5	6	7
37.	I invest considerable time and energy equipping others.	1	2	3	4	5	6	7
38.	I make it a high priority to cultivate good relationships among group members.	1	2	3	4	5	6	7
39.	I am always looking for hidden talents in workers.	1	2	3	4	5	6	7
40.	My leadership is based on a strong sense of mission.	1	2	3	4	5	6	7

41.	I am able to articulate a clear sense of purpose and direction for the organization's future.	1	2	3	4	5	6	7
42.	My leadership contributes to employees/colleague's personal growth.	1	2	3	4	5	6	7
43.	I have a good understanding of what is happening inside the organization.	1	2	3	4	5	6	7
44.	I set an example for placing group interests above self interests.	1	2	3	4	5	6	7
45.	I work for the best interests of others rather than self.	1	2	3	4	5	6	7
46.	I consistently appreciate, recognize, and encourage the work of others.	1	2	3	4	5	6	7
47.	I always place team success above personal success.	1	2	3	4	5	6	7
48.	I willingly share power with others, but do not abdicate my authority and responsibility.	1	2	3	4	5	6	7
49.	I consistently appreciate and validate others for their contributions.	1	2	3	4	5	6	7
50.	I serve others, and do not expect any return.	1	2	3	4	5	6	7
51.	I am willing to make personal sacrifices in serving others.	1	2	3	4	5	6	7
52.	I regularly celebrate special occasions and events to foster a group spirit.	1	2	3	4	5	6	7
53.	I consistently encourage others to take initiative.	1	2	3	4	5	6	7
54.	I am usually dissatisfied with the status quo and know how things can be improved.	1	2	3	4	5	6	7
55.	I take proactive actions rather than waiting for events to happen.	1	2	3	4	5	6	7
56.	I believe that to be a strong leader, I need to keep all subordinates under control.	1	2	3	4	5	6	7
57.	I find enjoyment in serving others in whatever role or capacity.	1	2	3	4	5	6	7
58.	I have a heart to serve others.	1	2	3	4	5	6	7

59. I take great satisfaction in bringing out the best in others.	1	2	3	4	5	6	7
60. I believe that it is important for me to be seen as superior to subordinates in everything.	1	2	3	4	5	6	7
61. I often identify talented people and give them opportunities to grow and shine.	1	2	3	4	5	6	7
62. I focus on finding better ways of serving others and making them successful.	1	2	3	4	5	6	7

Debriefing

Servant leadership is defined by both the PRESENCE of certain positive qualities, and the ABSENCE OF certain negative qualities.

The positive qualities include: (a) Servanthood, (b) Leadership, (c) Visioning, (d) Developing others, (e) Empowering others, (f) Team-building, (g) Shared decision-making, and (h) Integrity.

The negative qualities include: (a) Abuse of power and control, and (b) Pride and narcissism. These negatively worded statements can also be scored in the positive direction; by reversing the scoring, Abuse of power becomes Vulnerability, and Pride becomes Humility.

A simple way to determine whether one is a servant leader is to see whether one scores high on **Servanthood** and **Leadership**, but low on **Abuse of power** and **Pride**.

Thus, scoring high on Abuse of power and Pride automatically disqualifies one as a servant leader, regardless of high scores on the other subscales. That is why the inclusion of these two negative subscales is important in the revised Servant Leadership Profile.

APPENDIX E –Self-Assessment of Delivery of Interventions and Assessments

Last two digits of main phone number: _____

Your two digit birth month: _____

First two letters of the town you were born in _____

Years of Principal Experience _____

Years of Experience at Current School _____

Please answer the following questions based upon the period from August 2009 – January 2011. Circle the response that most closely describes your level of face-to-face interaction with students in delivering assessments or interventions.					
	Never	1 -2 x a semester	1 x a month	2 x a month	1 x a week or more
1. As a school principal, have you delivered reading interventions in a face-to-face manner to students?	0	1	2	3	4
2. As a school principal, have you given reading progress monitoring or benchmarking assessments in a face-to-face manner to students?	0	1	2	3	4

Interventions score: _____

Assessments score: _____

Total: _____

APPENDIX F –Thompson School District RTI Scoring Guide

RtI/PBS Implementation Self-Evaluation

School: _____ Date : _____

(Select One) Title: Administrator Certified Classified Coach Other

Review the RtI/PBS Implementation Evaluation Rubric. Determine which area of the rubric best describes your school for each activity and enter your score in the table below (Exemplar = 4, Best Practice = 3, Initial Implementation = 2, Adoption Readiness = 1). Please share this self-evaluation with your Implementation Facilitator at the 4th quarter review meeting.

Area of Implementation	Activities/Components	Score		Comments
Curriculum & Instruction	*Pyramid of Interventions			
	*High Quality Standards Based Instruction			
	*Tier II Standard Protocol Interventions			
	*Fidelity of Use			
	Instructional Scheduling			
TOTAL				
Assessment & Use of Data	Universal Screening			
	*Data Dialogues			
	*Progress Monitoring			
	Short-Cycle Diagnostic Assessments			
	Gap Analysis			
TOTAL				
Problem Solving Process	*Team Meetings			
	*Membership			
	*Protocols for Referral to the Problem Solving Team			
	*Protocols for Problem Solving Team processes			
	TOTAL			
School Climate and Culture	Positive School Climate			
	Behavioral Expectations Established and Taught			
	Positive Acknowledgement System			
	Use of Behavioral Data			
	SET Score (FYI only)			
TOTAL				
Leadership	School-wide understanding and focus			
	Professional Development			
	School-wide planning and resource commitment			
	Principal involvement			
	TOTAL			
Family & Community Involvement	Information to school community			
	Parent Involvement in Problem Solving Process			
	TOTAL			
OVERALL				

* Areas of focus for Spring 2010 which will require review of evidence and/or documentation.

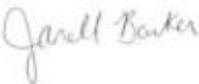
APPENDIX G –IRB Exempt Letter



Research Integrity & Compliance Review Office
Office of Vice President for Research
Fort Collins, CO 80523-2011
(970) 491-1553
FAX (970) 491-2293

DATE: February 22, 2011

TO: Donna Cooner Gines, Education
Traci Gile, Education



FROM: Janell Barker, IRB Administrator
Research Integrity & Compliance Review Office

TITLE: Principal Leadership in Response to Intervention (RTI): A Mixed Methods Study
Examining a Servant Leadership approach to Reform

IRB ID: 021-12H **Review Date:** February 21, 2011

The Institutional Review Board (IRB) Administrator has reviewed this project and has declared the study exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b)(2): Research involving the use of educational tests, ... survey procedures, interview procedures or observation of public behavior, unless: a) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects. The IRB determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as proposed in the Exempt application,** including obtaining and documenting (signed) informed consent if stated in your application or if required by the IRB.
- **Any modification of this research should be submitted to the IRB through an email to the IRB Administrator, prior to implementing any changes,** to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.
- **Please notify the IRB if any problems or complaints of the research occur.**

Please note that you must submit all research involving human participants for review by the IRB. **Only the IRB may make the determination of exemption,** even if you conduct a similar study in the future.