

RELATIONSHIPS BETWEEN LEADER'S LITERACY CONTENT KNOWLEDGE AND
MULTI-TIERED SYSTEMS OF SUPPORT

By

Melissa Marie Usiak

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ABSTRACT

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The 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA) spurred sweeping changes in how schools service struggling students—those who qualify for special education and those who do not. The reauthorization encouraged research-based instructional models that emphasize the analysis of student progress, and the development of Multi-Tiered Systems of Support (MTSS), that provide more rapid and targeted interventions. Elementary school principals are key instructional leaders in developing these new systems. As the majority of MTSS models are initially organized to support literacy achievement, principals' Leadership Content Knowledge (Stein, 2003) in literacy may play an influential role in the success of MTSS models. This study-examined relationships between 3 elementary school principal's literacy content knowledge and the implementation of MTSS within their schools.

Keywords: Multi-Tiered Systems of Support, Leadership Content Knowledge,

Literacy, Instructional Leadership

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CHAPTER 1

INTRODUCTION

Historically, American students struggling to read have been left to flounder until the end of a semester or an academic year before receiving much diagnostic assessment and targeted support. This pattern was based on a special education discrepancy model that located differences between an individual student's academic ability, as measured by tools such as IQ tests, and their academic achievement in school. This special education model, applied for decades, complied with the Elementary and Secondary Education Act (ESEA) of 1965. After years of this questionable method of service, the Individuals with Disabilities Education Improvement Act (IDEA) of 2004 gave states the flexibility to use either a discrepancy model or an approach named Multi-Tiered Systems of Supports (MTSS) as the basis for identifying students needing special education services. The newer MTSS models involved rapid assessment and intervention based on a student's response to instruction and literacy performance and was not necessarily exclusive to special education students.

IDEA was revised in 2006 to require states to allow public schools to utilize multi-tiered supports in the process of evaluation and certification of special education students (U.S. Dept. of Education, 2006). The directive was informed by research and development of the Response to Intervention (RtI) model, which emphasized early intervention and new data collection and analyses systems (National Center on Response to Intervention, 2010). Specifically, section 614(b)(6)(B) stated: "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 part of the evaluation procedures” (U.S. Dept. of Education, 2006). The premise was that schools would develop data systems to support early identification of reading problems and tiered interventions to respond rather than waiting for students to fail before providing support.

The shifts in IDEA and the research that lead to RtI reflect broad and deep changes in expectations for what all students should know and be able to do and how schools should support their achievement. One driver of these evolutions is the continued gap in special education rates and academic achievement between students from high and low-income families (Reardon, 2013). Income inequality has risen dramatically in the last 30-40 years. Indeed, achievement gaps related to income now supersede achievement gaps related to race. Additionally, high numbers of students continue to live in poverty. “Nationwide, child poverty in 2013 dipped for the first time this century, but nearly 30 percent of counties still have more children—particularly young children—living in poverty today than before the recession, according to the U.S. Census” (Sparks, 2014). Historically, students living in poverty have performed less well than students not living in poverty on most measure of academic success, including standardized tests, grades, graduation rates, and college enrollment and completion rates. More recent research has illuminated how growing up in poverty has adverse effects on children’s learning and development (Jenson, 2013). Health and nutrition, vocabulary exposure, self-regulation, and healthy stress levels suffer. Poor children have a higher likelihood of developing increases of grey matter in the brain, which can pose as cognitive lags.

These children walk through the doors of a kindergarten classroom already behind. This reality and new understandings are challenging current methods of teaching, learning and schooling.

Literacy achievement has been front and center across these attentions and developments. Teachers have been charged with rethinking how they instruct, assess and support all students to achieve more specific literacy standards and expectations (Nelson, 2000). Similarly, principals as instructional leaders are being asked to create conditions that support new instructional standards and practices. Leader responsibilities such as selecting curricula and assessment instruments supervising teachers, coordinating professional collaboration and development opportunities and communicating with all members of the school community place principals in the position of helping or hindering more effective literacy programs and outcomes. Principal's knowledge of how literacy is taught and learned may be pivotal to how well they are able to create the conditions that support effective literacy teaching and learning.

Many scholars have developed conceptions of how educational leaders can improve the quality and effectiveness of teaching and learning—the technical core of schooling, through more specific acts of instructional leadership (see, for example Elmore, 2000; Heck & Hallinger, 1999; Murphy, 1999; Resnick & Hall, 1998; Rowan, 1995). Prestine & Nelson pointed out “today’s schooling context demands different approaches to and different questions about the nature of educational leadership and its connections to teaching and learning” (Prestine & Nelson, 2003, p 3).

In her influential studies of reform in Community School District #2 in New York City Mary Kay Stein and colleagues considered connections between

educational leadership and subject content knowledge. They observed that principals who were more deeply knowledgeable about the teaching and learning of literacy were better able to articulate a literacy vision for the entire school (Stein et al., 1998). They were also better able to hire teachers that had an affinity for literacy and a desire to seek professional development in this area. Additionally, they were much more knowledgeable evaluators of quality literacy instruction and more able to provide instructional support for teachers:

Without question, the principal was the helm with respect to the shape and quality of literacy instruction in her building” (Stein & D’Amico, 1999, p 39). “Principals who are able to ‘size up’ the instructional milieu so efficiently can do so because they carry around a detail of what strong literacy practices looks like” (Stein et al., 1998, p 19).

Developing MTSS models clearly calls on elementary leaders to develop their instructional leadership skills. Following Stein’s observations, the question arises as to how a principal’s literacy content knowledge might further influence the quality of their MTSS models and how, in term, the demands of developing MTSS models might prompt principals to develop literacy content knowledge. This study investigates these questions.

Purpose of the Study

This study aimed to extend and enrich the literature on elementary principals' instructional leadership. Specifically, it explored how different forms of leadership content knowledge influences the development of effective literacy programs, the implementation of multi-tiered systems of support, and the potential interactions of the two.

The study has roots in my professional observations and work life. When I began searching for my first administrative position, after seven years in the classroom and extensive professional training and development in literacy, I was confident I possessed leadership content knowledge essential to the development of effective programs of teaching and learning for young children. Yet, time after time, I witnessed elementary principal positions given to secondary certified classroom teachers with little to no experience in educating five to ten year olds. I struggled with what seemed to me a wrongdoing: placing persons I deemed under qualified in extremely important school positions.

As a doctoral student, I conducted a small pilot study to test whether these former secondary school teachers developed effective literacy programs in their schools. I found that when principals had little to no knowledge in literacy content and pedagogy, they distributed instructional leadership to staff that did. This strategy of leaning on others' expertise seemed to provide teachers and students with necessary supports, but I remained interested in how rich content knowledge might influence instructional leadership and the quality of literacy teaching and learning.

As I contemplated this study, I was tempted to test whether weak literacy content knowledge might correlate with weak instructional leadership and weaker student literacy outcomes. After several months of wrestling with this notion, it became clear that a more thoughtfully open and descriptive examination of relationships between content knowledge and instructional leadership was a more productive framing than one based on more fixed hypotheses about prior knowledge and experience. I saw new demands on elementary principals to develop MTSS systems as a good context for exploring the relationships that interested me, and to also consider how influences between knowledge and leadership demands might actually flow in multiple directions.

My goals and motivations were also influenced by my professional values and commitments. I have served in two administrative positions working with largely at-risk populations. My leadership style reflects a desire for social justice. I have worked with hundreds of children living in poverty. I feel strongly that education, and most critically, the ability to read, are essential to any break in the cycle. Children living in poverty come to school at the age of four or five with significant disadvantages. We, as schools, need to establish systems and structures that more effectively respond to lagging skills and achievement.

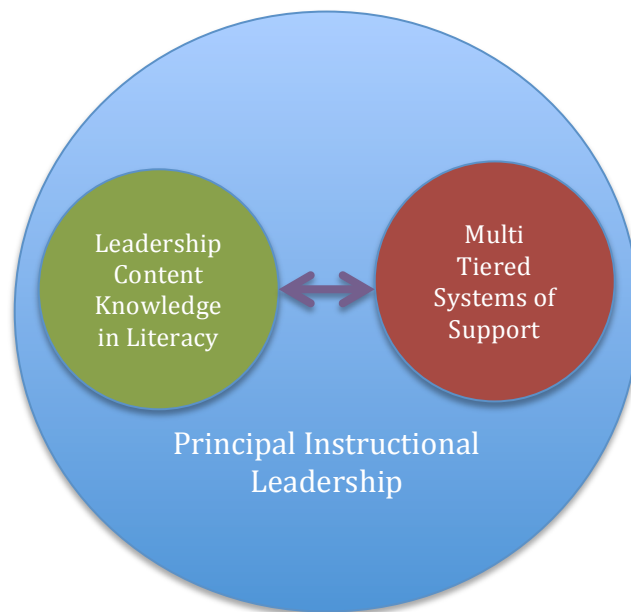
Drawing inspiration from Mary Kay Stein's (2003) construct of *leadership content knowledge*, this study developed to investigate the exercise of leadership content knowledge by elementary school principals engaged in building Multi-Tiered Systems of Support. It considered not only how prior knowledge might influence MTSS, but how the demands of implementing MTSS systems might influence the development of different forms of leadership content knowledge. The

study complements a growing body of research on the influences of subject matter knowledge and effective school leadership overall.

Conceptual Framework

The concepts of Leadership Content Knowledge in Literacy (LCK) and Multi-Tiered Systems of Support (MTSS) are nested within Instructional Leadership. The base level challenge is the need for principals to develop knowledge and skills as instructional leaders. In this nesting, instructional leadership is the encompassing skill. The potential relationship between LCK and MTSS is settled within the context of this more comprehensive school leadership role. In the depiction below (Diagram 1), Literacy Content Knowledge and MTSS can influence each other within principals' work as instructional leaders. The reason for this is to have the freedom to replicate whatever relationships surface in the study.

Figure 1: Conceptual Framework



Research Questions

Study questions were designed to dig into specific directional influences and interactions. The following research questions were proposed:

General question:

Within a principal's instructional leadership, what is the relationship between Literacy Content Knowledge and the design and implementation of Multi-Tiered Systems of Support?

Sub questions:

1. How does LCK influence the principal's building of MTSS?
2. How does designing MTSS interact with principals LCK?
 - a. Sub-Question: What is the school's MTSS design; how has it developed?

A third sub-question was originally proposed:

3. How do these two concepts interact within the larger role of instructional leadership?

However, in early cycles of data collection and analysis it appeared difficult to separate data related to the first and third sub questions so this last sub question was dropped. This shift did not affect the core purposes of the study and the over-arching question of relationships between Literacy Content Knowledge and Multi-Tiered Systems of Support.

Significance of Study

Elementary principals' instructional leadership and decision-making may be significantly influenced by their literacy content knowledge. Curriculum selection,

teacher hiring and assignment, scheduling, grouping, and many other decisions shape the conditions of teaching and learning in a school.

The study sought to provide insights on how the design and implementation of multi-tiered systems of support may be influenced by a principal's literacy content knowledge. Developing these systems also involves many key decisions. If, for example, data indicated poor levels of literacy proficiency among many students, a principal would need to determine what the source or sources of the problem might. He or she would need to consider questions of curriculum alignment. Or, consider the use of particular instructional strategies for particular learning objectives. Understanding children's emerging literacy skills might influence the effectiveness of assessment systems or the selection of interventions appropriate for particular types of reading difficulties.

Literacy content knowledge may also have a significant influence on the allocation of human and fiscal resources in and around an MTSS model. The strongest teachers of literacy are most valuable at the early elementary setting. These teachers are also highly valued in the role of literacy interventionists. Building capacity within a school is crucial also. More knowledgeable principals may make more strategic decisions in positioning individuals with deep literacy content knowledge in leadership roles in grade level teams, building leadership teams or district intervention teams.

Careful study of these relationships extends prior research on leadership content knowledge and math instruction (Stein & Nelson, 2003). Additionally, it reflects on how the demands of effective MTSS models might lead principals to develop or further expand their literacy content knowledge. Looking in both

directions, the work may help us better understand if, when and how principals draw on content knowledge to develop effective literacy programs and systems that support all students to achieve.

Lastly, all studies of effective leadership have implications for how we think about the work of school leaders and what types of training and development they need. While theory and research on instructional leadership has come to shape school leadership learning and degree programs, the role of content knowledge within that leadership is less understood and addressed.

Limitations

This study carries the limitations of small case study research. Its focus is on description and illumination and not on generalization. Sample size, location, and gender may all contribute to findings here that may or may not replicate at scale. Its aim was to generate insights on the potential influences of literacy content knowledge that might interact with wider literatures on instructional leadership and that might be more rigorously examined in larger studies.

Definition of Terms

The following review of the literature offers a deeper understanding of key terms situated in this study. Here, some basic definitions are provided for clarity and guidance:

- Instructional Leadership – the disposition of an educator in a leadership role that supports teaching and learning to enhance student achievement

- Leadership Content Knowledge – the understanding of the teaching and learning of subject matter knowledge possessed by a school administrator acting as an instructional leader
 - Literacy – the ability to communicate effectively through reading, writing, and comprehending text
- Multi-Tiered Systems of Support – A responsive and systematic use of data to create multi-leveled interventions that support student achievement. Tiers within the system are based on increasing intensity of service and frequency of assessment
- Literacy Content Knowledge – Disciplinary knowledge of the teaching, learning and assessment of literacy, including understandings of developmental continuums of skills in alphabetic principals, phonemic awareness, phonics, vocabulary, fluency and comprehension. Plus, particularly for school leaders, capabilities to facilitate teacher learning and ongoing improvement of literacy instruction for all learners.

CHAPTER 2

REVIEW OF LITERATURE

This study investigated how instructional leadership might be influenced by a relationship between principals' Literacy Content Knowledge and the building of Multi-Tiered Systems of Support. The particular focus was two-fold: identifying how principals use LCK to build MTSS, and how designing MTSS can build literacy LCK. This section discusses the research question in relationship to relevant literature. It begins with a review of instructional leadership research. Next, the review considers the literature on Leadership Content Knowledge with a focus on literacy teaching and learning. Lastly, current literature about Multi-Tiered Systems of Support is shared.

Instructional Leadership

Before leadership content knowledge can be defined, it is necessary to briefly explore the broader concept of instructional leadership. The topic of instructional leadership has been a part of the principal leadership literature for over thirty years and has captured the shift in emphasis on principals as administrative managers to principals as leaders of teaching and learning. The importance of instructional leadership was influenced by research findings that effective schools had principals that stressed the importance of instructional leadership (Levine & Lezotte, 1990; Brookover & Lezotte, 1982). The advent of standards-based reforms, or standards that describe the content that schools are expected to teach and that students are expected to master (Prestine & Nelson, 2003; NCTM, 2000; National Research Council, 1996), as well as accountability-laden legislation such as No Child Left

Behind Act (2002), has persistently generated interest in the principal's effect on student learning.

Researchers such as Hallinger (1992), Rowan (1995), Spillane and Halverson (1998), and Stein and D'Amico (2000), have spent their careers framing the work of school and district administrators as instructional leaders. Spillane et al. define instructional leadership as "an influence relationship that motivates, enables, and supports teachers' efforts to learn about and change their instructional practice" (2003, p. 1). Blasé and Blasé (2000) synthesize the literature about instructional leadership including exploratory studies of direct effects of principal behavior on teachers and classroom instruction (Sheppard, 1996) and studies of direct and indirect effects on student achievement (Hallinger and Heck, 1996). They describe instructional leadership in terms of behaviors such as making suggestions, modeling effective instruction, giving feedback, supporting collaboration, providing opportunities for professional development, and offering praise for effective teaching. DuFour (2002) proposed a change from "instructional leader" to "learning leader" which refocuses the attention from teaching to learning. The National Association of Elementary School Principals (2001) defines instructional leadership as "leading learning communities". Even with this amount of attention, the term instructional leadership often suffers from a lack of conceptual clarity and practical limitations (Hallinger, 1992). We do know that practicing instructional leadership requires school administrators to be knowledgeable about and supportive of instructionally sound methods (Nelson & Sassi, 2005).

This reconceptualization of leadership has spurred research that shows that leadership is only second to classroom instruction among school-related factors that

influence student outcomes (Leithwood et al., 2004). Work in preparation, certification, and licensure has strengthened standards for administrators. McREL's Balanced Leadership Framework (2004) describes leadership in terms of responsibilities. The first responsibility is directly involved in the design and implementation of curriculum, instruction, and assessment practices. The second responsibility is knowledge about current curriculum, instruction, and assessment practices. Both responsibilities are influenced by a school leader's knowledge in specific content areas. In addition, the Interstate School Leaders Licensure Consortium's Standards for School Leaders (2008) offers high-level guidance by establishing six principles for school leaders. Standard 2 states that "a school administrator is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth." This requires the administrator to have knowledge and understanding of student growth and development, applied learning theories, curriculum design, implementation, evaluation, and refinement, principles of effective instruction, and adult learning and professional development models.

Elmore (1996) defines this set of responsibilities as the "core technology" of schooling. Stein and D'Amico (1999) and Stein and Nelson (2002) argue that administrators who claim to be instructional leaders must have some degree of understanding of how instruction and learning differ in various subject areas. Stodolsky (1988) agree that, in the world of instruction and learning, content matters. "Subject-matter knowledge is as important to the work of school and district administrators as it is to teachers" (Stein & D'Amico, 1999, p. 31).

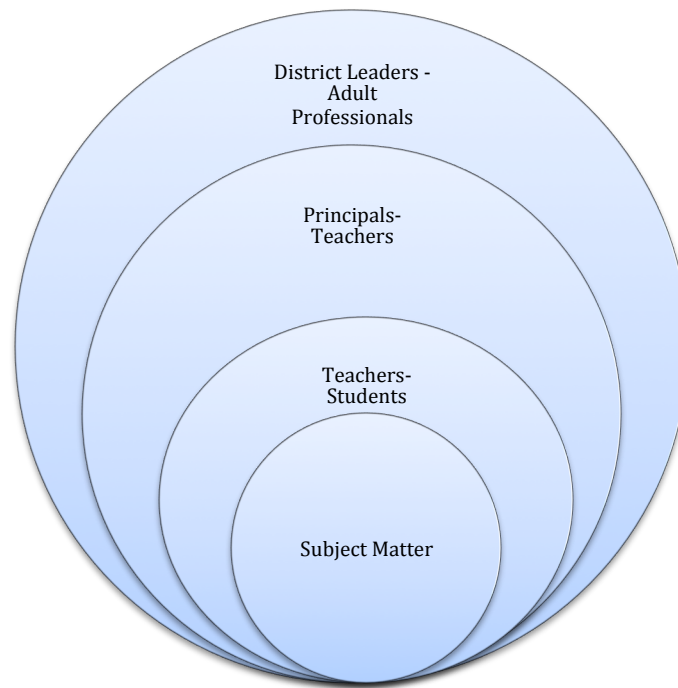
Leadership Content Knowledge

Lee Shulman (1986) contributed significant research to the educational community concerning the importance of subject matter knowledge in teaching. Through this research he developed the construct of pedagogical content knowledge: “an understanding of what makes the learning of specific topics easy or difficult: the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons”. Shulman’s work prompted questions of leadership content knowledge (Stein & Nelson, 2003) as a missing component in the analysis of school leadership. Leadership content knowledge is defined by Stein and Nelson as *the knowledge of academic subjects used by administrators when they function as instructional leaders* (Stein & Nelson, 2003). Stein and Nelson argue that administrators at each level, claiming to be instructional leaders, must have some degree of knowledge about the subject matters under their domain. Typically district and school leaders cannot come to understand content in the same way as a biologist or linguist because there is content knowledge to balance with pedagogical knowledge. Instructional leaders may not even be expected to know specific discipline to the degree their teachers might, but “as demands increase for them to improve teaching and learning in their schools, administrators must be able to know strong instruction when they see it, to encourage it when they don’t, and to set the conditions for continuous academic learning among their professional staffs” (p. 424). Knowledge about subject matter content is connected to knowledge about how to lead. For example, subject matter knowledge may be used to provide leadership in instructional reform, building

school culture, providing professional development, selecting curriculum, planning for interventions, and allocating resources.

Stein depicts the relationship between educators, including building administrators, at different levels of the educational system and provides a framework for identifying and analyzing the knowledge they use in doing their work. She entitles her conceptual framework nested learning communities (see diagram 1). Within the framework, the building administrator lands in the third of four layers with subject matter as the foundation or the first level. Teachers occupy the second level and the fourth is reserved for district administrators. Principals are viewed as teachers of teachers and, no matter how far they are removed from the classroom and the direct instruction of content; they are responsible for the learning of teachers and students. Of course, this depicts the role and essentiality of proficient leadership content knowledge for building principals.

Figure 2: Nested Learning Communities (Stein & Nelson, 2003)



Stein and Nelson, after analyzing three cases of instructional leadership, characterize leadership content knowledge at various levels of the school system as it is situated in the nested learning communities framework. For the purpose of this study, only characteristics that apply to the school will be discussed. In this level, the breadth of function increases, as does the level of learners. School administrators were found to need a level of knowledge of how adults under their supervision learn. Concomitant to that is the idea that teachers are concerned with how their students learn content. Therefore, principals need to understand how students learn a subject, how teachers learn a subject, and how the subject is taught. “Principals need to know that the history of the pedagogy in the subject (that is, how teachers might have been trained a number of years ago), the nature of the teachers’ subject matter knowledge, teacher misconceptions about the subject matter and the

learning of it, and how teachers work between developing new ideas (about the subject and the pedagogy) and developing new instructional practices” (p. 444). This knowledge is used to assist teachers in their learning as individuals and as collective members of learning communities. Other researchers have found that principals’ content knowledge influences the way they observe classroom practice (Nelson & Sassi, 2000; Nelson, Sassi, & Driscoll, 1999; Nelson, Sassi, & Grant, 2001), provide feedback to teachers (Nelson & Sassi, 2000; Nelson et al., 2001), and structure learning opportunities for faculty (Burch & Spillane, 2003; Nelson et al., 2001).

Stein and Nelson (2003) suggest principals be thoroughly grounded in one content area, including the way it is taught and the way it is learned. Having a deep understanding in one subject, what it entails to learn and teach for true content-specific knowledge, and what is required to provide organizational structures that support adult and student learning can develop leadership content knowledge. They argue that generalized knowledge in other content areas is not adequate because principals need to know strong instruction when they see it. However, they describe the concept of “postholing” to develop knowledge in secondary and tertiary subjects. This would involve delving into a slice of knowledge to gain a better understanding of the teaching and learning in that area. By knowing one subject intimately, instructional leaders can apply their understanding its intricacies when exploring multiple content areas and will be prepared to acknowledge the unique teaching and learning of these domains.

Literacy Content Knowledge and Literacy Leadership

In elementary schools, sources of strong literacy content knowledge are viewed as critical. Drawing on Stein's argument then, elementary principals would do well to have substantive literacy content knowledge. Literacy content knowledge involves in-depth understandings of curriculum, materials, and instructional strategies used to teach students alphabetic principal, phonemic awareness, phonics, vocabulary, fluency, and comprehension (National Reading Panel, 2000). It also necessitates an awareness of the variety of assessments that can be used to evaluate the progression of students' literacy skills including screening measures, formative assessments, and diagnostic tools. Strong literacy content knowledge would also guide instruction and intervention within a system as well as the professional growth staff needs in order to ensure effective literacy learning and teaching (McNinch & Gruber, 1996).

As researchers and practitioners strategically focus on literacy content knowledge and the principal's instructional leadership, they have generated convincing evidence that content knowledge and instructional leadership intersect. Browning (2003) states; "a crucial component of the elementary principal's role should be promoting and supporting effective literacy practices" (p. 6). Pitcher et al. (2003) found that the principal's knowledge of reading instruction, combined with leadership of vision, instruction and professional development, made a positive difference in the literacy development of student. They also argued that the differences in individual principal expertise, background and implementation style affected the school's literacy program.

Instructional leadership and literacy content knowledge also intersect in influencing the work of teachers. McNinch and Gruber's (1996) research showed that principals and teachers tended to hold common views of literacy instruction when they engaged in post-observation debriefings of literacy instruction. They argued, "The beliefs which teachers hold about literacy and learning influences how they teach literacy and are necessarily guided and sometimes controlled by their building principals" (p. 130). Likewise, Browning (2003), in his research of literacy leaders, discovered that teachers in schools that were improving had a positive view of what their principals did to support literacy.

McGhee (2007) and Booth and Roswell (2002) acknowledge that the topic of leadership for literacy content learning is not extensive in the professional literature. Manning and Manning (1984) state that principal leadership may be "a missing piece in American literacy education" (p. 62). There have been numerous books written in the past decade that offer various guidelines on how to build systems and cultures that support literacy development: The Literacy Principal (Booth & Roswell, 2002), Leadership for Literacy (Murphy, 2004), and Leading a Successful Reading Program (Guth & Pettengill, 2005) are just a few. Often the suggestions made, such as "model a love of reading", are easier to declare than accomplish. Suggestions sometimes lack direct reflection of the research on instructional leadership intersecting with leadership content knowledge. Although the dialogue about literacy leadership may not be deeply seeped in research, it does provide some insight into the role, influence, and impact of the principal.

On a somewhat different course, Coburn (2005) investigated how school leaders' made sense of reading policy and how their thoughts influenced teachers'

understanding of such policy and classroom practice. She argued that principals play an important role in the social process of meaning making and interpretation based on their preexisting knowledge of reading instruction. As a result, principals influenced how teachers responded to policy ideas by shaping the structural, social, and cultural factors for teacher learning in the school. Coburn argues that principals directly and indirectly impact teachers' sensemaking of policy in additional ways. For example, they directly influence what access teachers have to policy messages. After all, principals are involved in district meetings, network through professional organizations, and receive state and national communications. Indirectly, principals influence teacher sensemaking by constructing teachers' social interactions with colleagues, such as professional development opportunities, which impacts how teachers interpret, adapt, and enact policy on their own classrooms.

Zemelman et al. (1998) made suggestions on the practical roles a principal can play in the development of literacy. They recommend that the building principal: 1.) be a reader and writer; 2.) be an audience for students by listening to them read; 3.) make sure classrooms have adequate supplies and materials; 4.) celebrate literacy school-wide; 5.) assist teachers with communication to families; 6.) use the instructional leader, supervisor, evaluator role; 7.) work at the district level to align curriculum and assessment; 8.) solicit teacher consultants to help teachers; 9.) nurture the growth of teacher leaders; 10.) read research and pass along ideas and articles to teachers; and 11.) help coordinate collaborative time for teachers to talk about teaching. Although these suggestions are not harmful to a principal's practice, they hover at a surface level and do not cultivate deep knowledge about the teaching and learning of literacy.

A Blueprint for Improving Literacy Leadership: The Principal's Role in Improving Literacy Instruction (2001), published by the Children's Literacy Initiative, defines nine elements of content knowledge in which to improve when principals want to provide instructional leadership in literacy. These areas are:

- 1.) Develop a literacy rich school culture;
- 2.) Craft leaders that will build capacity;
- 3.) Explore children's literature regularly;
- 4.) Be in tune with instructional methods, both observing them and supporting teachers in their use;
- 5.) Collaborate to provide solid and effective curricula;
- 6.) Options for organizing time and space in flexible ways;
- 7.) Assist in the alignment of assessment and content standards;
- 8.) Establish special interventions for struggling and advanced students; and
- 9.) Invest in the research on literacy to build knowledge.

The Children's Literacy Initiative (CLI) observes the critical role that principals play in creating successful schools. In fact, during CLI's work with teachers, they encourage building administrators in their work to shape their schools' learning communities and to support their teachers. They have often developed professional development for administrators including a three-day institute focusing on their five instructional practices and ways to identify their use in classrooms. They have partnered with such organizations as Baltimore's Fund for Excellence Administrators Initiative, the Office of Teaching and Learning and the Principals' Center for the Garden State in New Jersey.

NAESP (2002) captured three recommendations to middle school principals can promote schoolwide literacy that could be universally applied to K-12 settings. The first step for a principal, or instructional leader, in creating a schoolwide literacy effort is to examine her own level of commitment to the belief that each

child can read and write at grade level expectations or make annual growth. One way to show that commitment is to promote literacy in conversations with students, staff, families, and community members. Commitment is also demonstrated through knowledge of the subject. Knowledge is built through studying professional journals, observing exemplary instruction, attending professional development in literacy, and scheduled discussions with teachers and literacy specialists. Of course, it takes more than commitment for literacy achievement to make an impact on a school's culture. A building leader must also take on her commitment by working closely with staff to identify student needs. Examining assessment data for each grade to identify patterns of strengths and needs is an effective practice. Principals can meet with grade-level teams of teachers and specialists to analyze data and compile lists of students who are performing at grade level; those who are performing above grade level; and those who are performing one or two grade levels behind and those more than two levels behind. The next step is to develop interventions to better support all students. The final step in this schoolwide initiative is to establish and implement a literacy culture in every classroom. To do this, instructional leaders should increase both visibility in the classroom and discussions with classroom teachers.

Finally, the *Journal of Reading* suggests activities and strategies intended to complement students' literacy learning (Sanacore, 2004) which principals can support. For example, building administrators can support school time for students to be engaged in actual reading at their level in English language arts and in content areas. Independent reading is not a new concept but deserves reconsideration in order to promote lifetime literacy. The principal's serious treatment of independent

reading can be demonstrated in a comprehensive look at the use of school time and the instructional day.

From all of this literature, a few themes emerge. Principals can and should create a culture and environment that promotes literacy. They should be readers themselves and model that for students whenever possible. Principals can help to align curriculum and provide time and space for teacher collaboration. More significant to the development of principals as instructional leaders of literacy are suggestions that they actively study current research-based practices and engage in purposeful conversations with teachers around literacy teaching and learning. Missing from these summaries, however, is the more recent emphasis on principals learning how to collect and analyze student literacy data to make decisions.

Leadership content knowledge is more important than ever in school reform. Principals need foundational understandings of the teaching and learning of literacy to shape school environments that will support strong core instructional as well as early interventions for students in need. One of the most recent national and local efforts, Multi-Tiered Systems of Support, is no exception. Current school leaders that have a deep understanding of literacy can utilize such knowledge when implementing MTSS. A symbiotic relationship between the two can lead to continuous school improvement and student success.

While a considerable convergence of views and findings have emerged from research on instructional leadership and literacy content knowledge, definitive definitions have not emerged. In the case of instructional leadership, this study has leaned on the Heck and Hallinger definition:

A specific definition of literacy content knowledge has not emerged from the literature. Thus, for purposes of this research, a definition is proposed that describes literacy content knowledge as: *Disciplinary knowledge of the teaching, learning and assessment of literacy, including understandings of developmental continuums of skills in reading comprehension and vocabulary, as well as capabilities to facilitate teacher learning and ongoing improvement of literacy instruction for all learners.*

School leaders with literacy content knowledge are intimate with the curriculum, materials, and instructional strategies used to teach students alphabetic principal, phonemic awareness, phonics, vocabulary, fluency, and comprehension. They are aware of the variety of assessments that can be used to evaluate the progression of students' skills including screening measures, formative assessments, and diagnostic tools. Strong literacy content knowledge would also guide instruction and intervention within a system as well as the professional growth staff needs in order to ensure effective literacy learning and teaching.

Multi-Tiered Systems of Support

Multi-Tiered Systems of Support (MTSS), formerly referred to as Response to Intervention (RtI), has been added to a growing list of buzzwords and acronyms in K-12 education. MTSS is a coherent continuum of evidence based, system-wide practices to support a rapid response to academic and behavioral needs, with frequent data-based monitoring for instructional decision-making to empower each student to achieve high standards. These ideas indicate a more universal system of

servicing all students versus the more inclusive system of servicing some students found throughout the history of American education.

Although knowledge of MTSS has been eminent in many schools, districts, and state departments of education across the nation, it is still a fairly new way of thinking about teaching, learning, interventions, and data use to better serve all students. Several sample definitions unfold here as well as various models found in practice. Essential components are framed and an historical context of the movement follows.

To date, there is not one single definition of MTSS (or RtI for that matter). Frankly there are as many definitions as there are relevant resources currently in the field. Although numerous definitions exist, certain tenants are present in most representations. Some encompass systems to improve behavior and some improve academics. For the purpose of this piece, academics will be the focus. Since Response to Intervention has recently evolved into Multi-Tiered Systems of Support, most of the resources reference RtI.

Burns and VanDerHeyden (2006) describe MTSS as a systematic use of data to efficiently allocate resources in order to improve learning for all students. Others define it primarily as a resource allocation model in which assessment data are used to match student needs and interventions (Batsche et al., 2005; Tilly, 2008). Although the redeployment of resources to match student needs is a primary function of an RtI model, many definitions introduce the multi-tiered level of supports. “Response to intervention integrates assessment and intervention within a multi-level prevention system to maximize student achievement and to reduce behavior problems” (National Center on Response to Intervention, 2010). The

Response to Intervention Network (2010) defines RtI as a multi-tier approach to the early identification and support of students with learning and behavior needs. The definition for Buffman et al. (2009) includes the practice of using students' learning rate over time and educational performance to make important decisions.

Narrower definitions differentiate between general education students and students with learning disabilities (LD). Gresham (2001) defines RtI as identifying a child with LD after academic behaviors do not significantly change pre- and post-implementation of a validated intervention. The Michigan Association of Administrators of Special Education acknowledges that one the roles of RtI is that of gatekeeper for eligibility (2007). It is "a new movement that shifts the responsibility from helping all students become successful from the special education teachers curriculum to the entire staff, including special *and* regular education teachers and curriculum" (Buffman et al., 2009, p. 2).

Ultimately, the purpose of RtI is to provide quality instruction for all students with focused interventions for students who struggle. RtI offers a framework for prevention of learning difficulties, interventions when students don't perform at the expected rate, and identification of students who need intensive interventions in addition to quality instruction in the regular classroom. Burns et al. state "The goal of RtI is not to identify children that are "truly LD" or even to improve the diagnostic procedures, but to enhance the learning of all children" (2008, p. 5).

Although different version of RtI have two to four tiers of instruction (Fuchs et al., 2003), Tilly (2003) states that the most effective way to accomplish RtI is through a three-tiered model based on increasing intensity of service and frequency of assessment. Increasing intensity is achieved by (a) using more teacher-centered,

systematic, explicit instruction; (b) conducting it more frequently; (c) adding to its duration; (d) creating smaller student groupings; and (e) relying on instructors with greater experience (Fuchs & Fuchs, 2006).

To illustrate this three-tiered model, Tier 1 is considered Core Instruction, Tier 2 is Targeted or Supplemental Instruction, and Tier 3 is Intensive Instruction. Tier 1 is referred to as the core, universal, or primary program that all students receive in the general classroom setting. These are the initial instructional practices that all students receive every day. Intervention models are based on the assumption that the core program meets the needs of 75%-80% of the students. A school that has significantly less than 75% of its students at or above grade-level proficiency has a core problem that needs to be addressed before interventions can be truly effective (Buffman et al., 2009). A core program should include differentiated instruction, the use of power standards or “big ideas” (Shinn, 2009), analyzing assessment data, ensuring quality teaching and focused staff development, maximizing instructional time, and using programs with fidelity.

When the core instruction in Tier 1 alone does not meet the needs of every child, a Tier 2 must be established. Tier 2 focuses on providing supplement interventions often delivered to small groups of students that are lagging behind their peers. The instruction occurring during these interventions is focused on students’ needs and should support the teaching and learning in Tier 1. The more targeted the intervention, the more effective it will be. Tier 2 interventions can take place within the regular classroom setting as well as out of the classroom. An effective Tier 2 supplement level should meet the needs of 10%-15% of struggling students.

Some students who have received Tier 1 core instruction and Tier 2 supplemental interventions continue to struggle. This should ideally be no more than 5% of the student population. These children instruction that is even more intensive and even more tailored to their needs. Interventions that provide such instruction are known as Tier 3. Intensive can mean the amount of time each day, the number of weeks the intervention lasts. These interventions may be guided, but not necessarily taught, by the classroom teacher. In any multi-tiered system of supports, scheduling of the interventions and communication between staff supporting students is key.

Not only does the intensity of the instruction increase in the multi-tiered model, assessments frequency increases as well. In Tier 1, benchmark assessments are done with all students three times a year. These assessments can screen for students who are struggling and provide teachers with a baseline three times a year of how all the students their classes are performing. Students in Tier 2 intervention should be monitored twice a month on their target skill to ensure adequate progress and learning. Progress monitoring of a student's target skill should be done more than twice a month in Tier 3. "A school must have a coherent system of instruction and assessment to monitor student learning and respond systematically when data suggests problems exist" (Burns et al., 2009, p. 28).

The evolution of RtI dates from Stanley Deno's *cascade model* of 1970 that included a continuum of environments in which students could learn. The mandate to provide services for children with disabilities was formally established in 1975 with the original authorization of the Individuals with Disabilities Education Improvement Act (IDEA). This made it illegal to exclude students with disabilities

from public schools and made serving these students in least restrictive environments a legal requirement. The cascade model led to the inclusion model where students with special needs were taught in general education settings. In the 1980s and 1990s, schools found that general education teachers were ill-prepared as they tried to meet students' needs, a dilemma that continues to plague many of our classrooms to date.

The cascade and inclusion model were intended to better serve students in special education, however they focused more on philosophical issues, such as the moral imperative to get students in general education settings rather than on empirical evidence of effectiveness (Brown-Chidsey & Steege, 2005). In 1997, the IDEA encouraged educators to use results-orientated systems that complied with proper rules and procedures. In other words, schools should be able to support what they are doing with evidence that it is working. Regulations were to be followed but student progress was equally important. Although these were important changes to the law, practice changed very little.

The reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA) in 2004 brought significant shifts to the world of special education. Allowable funding for prereferral interventions went from 5% to 15%. The allowance of students to qualify for services based on their response to scientific, research-based interventions was strengthened, no longer relying on the historical discrepancy model. In fact, states can no longer require IQ tests to identify students as Learning Disabled and students cannot be identified for special education without documenting that low achievement is not due to lack of instruction in reading and math or lack of proficiency in English. IDEA 2004

provides procedural safeguards. For example, interventions through an RtI model cannot be used to delay referral or evaluation, although RtI models provide data so that the school team can determine which students are not doing well due to disability and which students are not doing well due to mismatch between students' needs and instruction.

Many of these changes also align with No Child Left Behind initiatives. Under NCLB, all students are to demonstrate proficiency in math and English Language Arts by June 2014. NCLB requires annual measurement of all children's progress, and subgroup reporting by race, disability status, English Language Learners status, and socioeconomic status. Because of this, NCLB and IDEA are unarguably linked.

Another force driving the MTSS energy is the early reading research from the past twenty years. It has focused on skills good readers possess, the skills poor readers lack, and the components of effective early reading instruction. Four important policy reports on early reading support RtI are the National Institute of Child Health and Human Development (NICHD), the National Reading Panel (NRP): *Put Reading First*, the President's Commission on Excellence in Special Education: *A New Era*, and the Fordham Foundation Progressive Policy Institute: *Rethinking Special Education for a New Century*. Findings from these major policy reports include:

- Reading trajectories are established early and are remarkably stable; students who leave first grade behind in reading nearly always stay the same (NICHD, 1997).
- Effective reading instruction should be comprehensive and include instruction in the five essential component areas: phonemic awareness, phonic, fluency, vocabulary, and comprehension (NRP, 2001).

- Embrace a model of prevention instead of a model of failure (*A New Era*, 2001).
- Sound prevention programs can reduce the number of children needing intensive special education programs and that they should be implemented immediately (*Rethinking Special Education for a New Century*, 2001).

The RtI movement can also be attributed, in part, to the increasing availability of assessments, particularly the release and use of research-based curriculum based measurements (CBM). In order to evaluate effectiveness of instruction and interventions, student progress should be monitored. CBMs can also identify students who may need intervention and modification to instruction. CBM data can help determine a student's rate of growth because these measures are sensitive to progress. Progress monitoring data inform decisions about when to adjust instruction, when to continue instruction, and when to dismiss a student from an intervention. CBMs can also identify a benchmark can be used to make decisions about whether or not a student is performing at grade level based on a score derived from multi-year national norms.

Using data to make decisions is just one of the core principles of RtI according to the National Association of State Directors of Special Education (NASDSE). NASDSE's *Response to Intervention: Policy Considerations and Implementation* (2006) outlines eight principles of RtI. These components cover the essential characteristics of what makes RtI much broader than qualification for special education and are based on the work of Batsche et al. (2006)

- I. We can effectively teach all children.
- II. Intervene early.
- III. Use a multi-tier model of service delivery.

- IV. Use a problem-solving model to make decisions within a multi-tier model.
- V. Use scientific, research-based validated instruction and intervention.
- VI. Monitor student progress to inform instruction.
- VII. Use data to make decisions.
- VIII. Use assessment for screening, diagnostics, and progress monitoring.

Burns and Gibbons (2008) explain their understanding of the RtI components as: (1) systematic use of assessment data; (2) efficient allocation of resources; (3) enhanced learning; and (4) applicability for all children. Of course, these lists may make RtI look easy once it is in place, but getting a system to full implementation is a challenge. Many variables can affect how difficult the work can truly be.

Decisions for how students move through this continuum of supports should be guided by a process. One process is based on the scientific method and referred to as the problem solving model. For example, Iowa has developed a problem-solving model that utilizes the following questions when addressing each student situation (Education Evolving, 2005): (1) What is the problem? (2) Why does it exist? (3) What should be done to address the problem? And (4) Did the intervention work? What comes next? This system relies on staff members' input to establish an individualized student plan. This shared decision-making team is composed of various school personnel who convene to identify a student's areas of concern, proposes strategies that address the problem, evaluates the outcome, and then meets again to determine if the issue has been resolved. This requires more specific student plans, multiple intervention programs, and more complex training,

progress monitoring, and decision-making than the second common approach, the protocol system.

In the protocol system, also called the standard treatment protocol, students qualify for an intervention based on pre-determined criteria, such as cut points, and identification of the student's deficiency. A school would be prepared to deliver one or two interventions dependent on the student's instructional response for a fixed duration of time. These interventions may target specific skill deficits such as reading fluency or reading comprehension. Protocol systems require pre-established qualification criteria, a limited number of interventions, and straightforward staff training, progress monitoring, and decision-making. Regardless of the system, implementation takes significant effort, including a monumental commitment to the professional development of the teachers and staff.

Success with RtI, like other education initiatives, requires an effective professional development strategy that supports the school improvement efforts of the building and district. Research on professional development models indicates that sustained, job embedded, long-term approaches are the most likely to impact systems change (Hall, 2008). A plan for RtI professional development should vary in format and may include, but should not be limited to, workshops, grade-level meetings, assessment training, and coaching sessions. When implementing RtI, the professional development content should be reflective of the stage of implementing RtI, the professional development content should be reflective of the stage of implementations as well as the knowledge, skills, and beliefs of the participants. Professional development for RtI should not be reserved for special, or even general, education teachers. The audience should be broadened to include administrators,

Title I staff, school psychologists, speech therapists, social workers, aides and para-educators. With this paradigm shift of RtI, comes an evolution of the traditional roles of school staff, which must be supported by professional development. Not only do the various staff members need to be educated about RtI, parents and families should be informed members of the school community as well.

It is essential that parents have a basic working knowledge of RtI and its benefits, especially parents whose children may be involved in Tier 2 or Tier 3 interventions. Most current initiatives involve parents at a superficial level with the basic notification of services (Lau et al., 2005), although Burns et al. (2009) recommended including parents in meaningful ways, such as representation on problem-solving teams and conscious communication, is important. Lack of parent involvement can result in misinterpretation of an intervention or support as punitive (Buffman et al., 2009).

Effective RtI models can bypass the full impact of a learning disability by preventing the disorder from rising to the level of disability and support struggling learners that may not have *qualified* for intervention in the past. A desired outcome is a system built around prevention and intervention available to any and all students so that proper identification of students with disabilities can occur after all other supports are exhausted. Finally, a critical lesson from RTI is that general and special educators must no longer be thought of as separate services. Despite these ideal hopes associated with RtI, what does the research say about its effectiveness?

Hughes and Dexter (2010) reviewed published studies on the effectiveness of different RtI models. These field studies of eleven RtI programs, including problem solving and protocol models, found some level of improvement in academic

achievement or performance for at-risk learners. The second finding relates this improvement to primarily early reading skills for students in elementary schools, in part to the limited amount of research on RtI and math and at the secondary levels. This review also found that referrals and placement rates remained constant or decreased. Although it was not the focus of the review, authors identified several consistent factors that appeared necessary for scalability and sustainability of RtI structures including extensive, on-going professional development, district and building administrative support, teacher buy-in and willingness to adjust instructional roles, involvement of all school personnel, and adequate meeting time for coordination and collaboration.

Case et al. (2003) tested a response to intervention model with first and second grade students at-risk for reading difficulties in one school. They found that an RtI model improved the school's current pre-referral system in several ways. First, all children were monitored and evaluated continuously. Second, the measurement model (based on the use of curriculum based measurements) was well established. Third, intervention implementation was monitored for fidelity. A fourth strength was an ability to identify low performance at the classroom level suggesting a need for classroom-level interventions to improve instruction prior to identifying children as disabled.

Concerns about the use of curriculum-based measurements in the assessment system have surfaced during the RtI initiative. Research on curriculum based measurements as general student outcome measures dates back 30 years. Substantial findings show that when teachers use curriculum-based measurements they receive reliable and valid information about student progress and achieve

improved outcomes (Stecker et al., 2005). Despite this strong support, it remains that no movements between tiers should be determined solely on curriculum based measurement data.

The research on school effectiveness and instructional leadership underscores that one of the most important factors in implementing an RtI model is leadership (Hall, 2008). Although many schools rely on the special education department and its staff to implement RtI, it is best thought of as a general education initiative needing the leadership of superintendents, curriculum directors, building administrators and teacher leaders. But, the principal's role is the most critical in implementing response to intervention and achieving better student outcomes. It is reasonable to propose then, that principals with stronger literacy content knowledge can more positively shape the systems and structures that guide MTSS practices than those who do lack this knowledge. This study explores this proposal.

CHAPTER 3

DESIGN and METHODS

Qualitative case studies invite researchers to explore and describe a phenomenon in context by developing and intersecting a variety of data sources (Baxter & Jack, 2008). This was a case study designed to investigate three principals in the same county in order to understand a phenomenon, population, or general situation and drew on the case study models developed by Yin (2003) and Maxwell (2005). The framework of this inquiry focused on the “empirical study of the differing ways in which principals experience, perceive, apprehend, understand or conceptualize various phenomena in, and aspects of, the world around them” (Marton, 1970). Through cross-case examination of the data collected in each of these unique cases, patterns of commonalties were sought (Munhall, 1989). As principals in this study explain how they may have used their literacy content knowledge to build MTSS or how building MTSS may have increased their literacy content knowledge, they will help us understand how these sets of experiences interact.

Context

The study selected 3 elementary principals from 3 mid-Michigan school districts that participated in the 7th cohort of Michigan's Integrated Behavior and Learning Support Initiative (MiBLSi) grant during the 2010-2011, 2011-2012, and 2013-2014 school years. Enrollment in MiBLSi offered a means of identifying principals in schools engaged in complex literacy development challenges.

MiBLSi aims to create a scalable, statewide system of support for literacy achievement using implementation science to design a system in stages over several

years. The Michigan Department of Education's Office of Special Education and the U. S. Department of Education's Office of Special Education Programs fund the grant.

MiBLSi provides training and support for the development and implementation of integrated behavior and reading systems, now known as Multi-Tiered System of Support. It promotes a schoolwide approach to effective reading support using a three-tiered model of prevention and intervention in student's reading problems. The approach involves team-based training in strategies for preventing reading problems, supporting children with the most intense reading difficulties, and integrating effective academic and instructional systems. It advocates evidence-based practices; progress monitoring; and data-based decision making. The aim of the initiative is to help schools and districts develop capacities for supporting all students: those with special education status and those that do not, to reach key learning benchmarks. There is an expectation that these systems, when implemented with fidelity, develop data-based decision-making at all levels and are durable over time.

Sample

To retain a focus on elementary literacy learning and instruction, the sample targeted principals in elementary schools serving kindergarten through second grade students (in buildings that may serve other grades also). The principals were identified and recruited in two phases. In the first, the county's Intermediate School District provided building assessment data collected during the fall and spring of each year of MiBLSi training, identifying schools by stages of MTSS implementation. The Building Self-Assessment (BAS) is a self-report of MTSS implementation in which leadership teams assign a status of either "Not Started," "In Progress",

“Achieved”, or “Maintaining” to various components of MTSS. Data from BAS was used to identify schools in these different categories. Three schools indicating mostly “achieved” and “maintaining” implementation status and four indicating generally low implementation status were identified. This sample represented implementation variations within a group of schools that had all received similar MiBLSi training.

In the second phase, the 7 principals of these schools were contacted by phone or email and asked if they would participate in the study. In light of the demands on their time, it was difficult to secure willingness to participate amongst them all. I was, however, able to recruit 3 principals working in a mix of urban, urban-suburban and rural settings, in buildings at different stages of MTSS implementation. The principals varied in gender, training, professional learning pathways and teaching experiences prior to the principalship. The implementation of MTSS in their schools fell in the range of low to high. They surfaced as a representational group of the elementary school principals from across the county.

Sources of Data

Multiple sources of data were collected in a sequence documented below. After selection and recruitment, data collection began with an observation of a data meeting that provided a view of the principals interacting with their staff around literacy practices. The observation was followed by a debriefing interview with the principals involving mostly background and clarification questions about the routines, behaviors and processes observed.

Table 1: Sources of Data

Observation	Document Analysis	Interview
1. Observation of team meetings	2. Analysis of • SIP documents, • Meeting agendas, • Protocols, • System flowcharts, • Data guides, forms, and charts; • MIBLSI documents and assessments.	3. Post observation interview with principal 4. Clarification interview with teacher leader 5. Follow up interview with principal

Prior to a more extended principal interview, analysis of key school documents and the observation data were conducted to inform that interview. The principal interview was the final source of data collected.

- *Building Assessment Survey*: The Building Assessment Survey measured the implementation rate of various components of MTSS. It was a required reporting activity during MiBLSi training and parallels the implementation stages of a new initiative. It was used to mark progress as well as indicate areas on which schools should continue to focus. This data ensured that principals, along with their building leadership teams, were reflecting on the development of systems and structures. This data was also used to indicate individuals who were principals at the start of the cohort and remained in that role at the time of this study.
- *Leader/ MTSS Process Observation*: To gain a sense of leadership in action, I observed a principal during either a literacy team meeting, a data team

meeting, or a grade level team meeting. This observation of data meetings allowed me to see leadership of MTSS in action as teams discussed grade level data and individual student data. See Appendix D.

- *Observation Debrief with Principal:* The intention of this interview was to probe the events of the observed meeting in order to understand some of the principal's thinking about and leadership of MTSS as well as key issues in MTSS design and implementation in the school. See Appendix B.
- *Document Analyses:* To prepare for the second principal interview I conducted analyses of the following documents: school improvement plans, meeting agendas, protocols, system flowcharts, data systems, guides, forms, posters, charts and/or MIBLSI documents and assessments. Developing this understanding prior to the meeting allowed me to ask *Why?* questions that help me understand the principals thinking and the degree to which it might be influenced by literacy content knowledge or other forms of instructional knowledge. These helped me to understand the design and development of the schools MTSS system.
- *Documents Clarification Interview with a Teacher Leader:* This provided an opportunity to ask clarifying questions on how the teaching and learning of literacy was approached and how the school's MTSS had evolved that might arise from the document analysis. It allowed principal interview time to focus on how and why questions, rather than "what" questions. (See Appendix A.)
- *Principal Interview:* The semi-structured interview focused more on potential relationships between the principal's literacy content knowledge

and the MTSS by probing more on the principal's why, or the process of how, things are done in a particular manner. See protocol C. The main source of data will be this face-to-face, semi-structured interviews, which allow for conversation and probing (Schostak, 2006; Baumann & Bason, 2004). The semi-structured approach helped ensure comparability of data across individuals, times, settings while not leading or constraining participants responses (Maxwell, 2005). See Appendix B.

While collecting data, I referenced the matrix below that provides a cross-walk of indicators across MTSS components, instructional leadership and literacy leadership content knowledge. While a principal demonstrates the behaviors indicated in the two right columns, they are potentially playing out one or more of the MTSS components lists on the left.

Table 2: Indicators and Influences of MTSS on Instructional Leadership and Literacy LCK

MTSS Components	Instructional Leadership	Indicators of Literacy LCK
1. Intervene Early	Model effective instruction 5	Possess subject matter knowledge (literacy) - How it is taught/instruction 2, 5
2. Multi-Tier model of service delivery	Give feedback/evaluation	Possess subject matter knowledge (literacy) - How it is learned 3
3. All children can be taught effectively	Support collaboration 4	Promoting and supporting effective literacy practices 5
4. Use problem solving model	Provide PD opportunities/adult learning	How principals build systems/cultures that support literacy 2, 9
5. Research based instruction/interventions	Knowledgeable/supportive of instructional methods/curriculum/assessment 5, 8	Curriculum work 5

Table 2 (cont'd)

6. Monitor student progress	Design/implement instructional methods/curriculum/assessment 2, 5, 8	Options for organizing time/space in flexible ways 2, 9
7. Use data to make decisions	Knowledgeable/understanding of student growth/development 6, 7, 8	Align assessments and learning standards 7,8
8. Use assessments for screening, diagnostics, progress monitoring	Knowledgeable of applied learning methods 2, 3	Establish interventions 5
9. Efficient allocation of resources		Invest in research 5

Data Analysis and Interpretation

Coding for Key Themes

The first data brought to study questions was observation data of principals interacting with staff at an MTSS data meeting. For each observation record I looked for comments and behaviors demonstrating different forms of knowledge. That is, I noted any evidence of principal's literacy content knowledge (for example comments demonstrating knowledge of how literacy is taught and learned or how assessments and learning standards are aligned), MTSS knowledge, (comments on the purposes of tiers or forms of intervention) instructional leadership (references to key supports for high quality literacy programs) and knowledge of curriculum and instruction. Similar processes were applied to debriefing and interview data as well as the teacher clarification interview data.

Using this open-coding process, I identified first order themes and patterns by developing a matrix based on core components of MTSS and literacy content knowledge to code, count and identify possible patterns in each principal's responses across sources of data. Triangulation between observation, document and interview data was then used to develop a set of descriptive findings for each

principal and to test interpretive findings on interactions between elementary principals' literacy content knowledge and the implementation of MTSS (Maxwell 2005, Denzin 1989).

After this first series of analyses, I made a decision to subsume the last category of knowledge, (knowledge of curriculum and instruction) into the first category—literacy content knowledge—as there was not sufficient amount of clearly distinct data to support a separate finding specifically around knowledge of curriculum and instruction. Any noteworthy evidence of this kind surfaced when principals shared how literacy was taught and learned or how assessment and learning standards were aligned, and the research question concerning how LCK influenced the principal's building of MTSS could be addressed.

Development of Cases

Following this first order analysis, narrative cases of each leader were developed to communicate first order findings. Each case offers a summary portrait of the MTSS and core literacy program of each leaders school and capture their working knowledge and applications of how literacy is taught and learned (situated in the third, or school-level, oval of Diagram 2) the alignment of assessments and The descriptions of knowledge offered in the cases is, of course, incomplete and imperfect, but captures evidence that may support more nuanced understanding's on how principals use literacy content knowledge to influence the building of MTSS and/or how building MTSS influences their LCK knowledge.

Cross-Case Analyses

Following the individual level cases, cross-case analyses returned to the core questions on the interactions and influences of different forms of leadership content

knowledge and how they might influence the development of effective teaching and learning programs in schools and the exercise of instructional leadership more broadly. The analysis process used similar thematic coding processes as with the raw data, but this time it was directed towards larger themes and patterns.

Validity and Credibility

I noted earlier how this study was informed by personal experiences and a struggle against certain biases. Here, and in any qualitative research, it is important to recognize how personal beliefs and interpretation processes might bear on the validity and credibility of the study. For example, the analyses processes described above may invite forms of reactivity that threaten the credibility of the study (Hammersley & Atkinson, 1995). In response, I have drawn on a few core strategies advocated by Maxwell (Maxwell, 2005).

First, I have designed the study to draw on several sources of data. Triangulating multiple forms of data, here to include resume information, BAS reports, observation data, document data, teacher leader data and interview data, is recognized to strengthen credibility by reducing the risk of chance associations or bias based in a single data source. Triangulation also assists in the development of confirmations across data.

Second, analysis has included checks on discrepant data points that contradict developing associations and interpretations. Attention to these is known to enrich understanding and discipline findings to the actual evidence at hand. Lastly, I have made some use of respondent validation (member checks) by sharing key sections and passages from the individual level case narratives with the study participants.

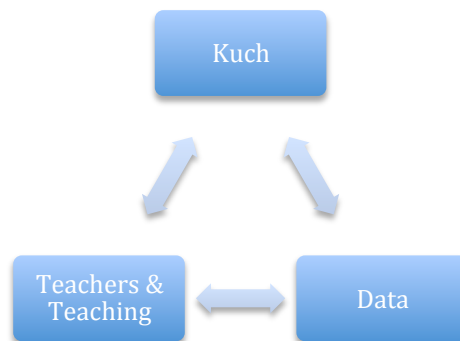
Judith Singer states that qualitative studies often have “face generalizability”; that is, they present no obvious reason not to believe that findings or interpretations might be applied more generally (Maxwell, 2005). Although limited in scope and impact, the exploratory and developmental nature of this study provides an opportunity to generate insights and more refined lines of inquiry or hypothesizing on relationships and interactions that might otherwise go unnoticed.

CHAPTER 4

CASE FINDINGS

Case #1: Sven Kuch- Developing leadership content knowledge while developing MTSS

Figure 3: Sven Kuch's Leadership



In the case of Sven Kuch,¹ we see how a former middle school teacher of language arts and social studies develops his literacy content knowledge as he applies his knowledge of MTSS. Mr. Kuch has been the principal of a K-4 school, Elmore Elementary School, in the mid-sized district of Hattievile in central Michigan for 3 years. Prior to becoming an administrator, he taught fifth and sixth grades for nine years in the Hattievile District. He also served as the at-risk coordinator for ninth grade students for a year before serving as an interim principal at one of the district's middle schools for one semester. Most all of Mr. Kuch's experiences with MTSS align to his time as a principal and not his time as a classroom teacher.

As Mr. Kuch completed an Educational Specialist degree in K-12 Educational

¹ This and all other person, school and district names are pseudonyms.

Administration, he desired to become an elementary principal and hoped to have more opportunities to work with parents, adults, and teachers. He shared that he wanted to be part of the “bigger picture” as well as fulfill his competitive nature. Mr. Kuch’s investment in his work is heightened by the fact that he has lived in the Hattieville community during his time as both a teacher and an administrator.

Elmore Elementary serves a student population of approximately 400 students in kindergarten through the fourth grade. It is one of six elementary schools in the district and has the second largest percentage of students qualifying for free and reduced breakfast/lunch. In 2013-2014, 28% of third graders and 30% of fourth graders did not meet reading proficiency standards on the Michigan Education Assessment Program (MEAP). Mr. Kuch has presided over gains in student achievement during his tenure. He attributed much of the progress in literacy to Elmore’s MTSS and greater use of data:

“Three years ago (2014), we got nailed by the State for having too large of a gap (between the highest and lowest performing students) and our top to bottom ranking was not good. We were told we would be put into a corrective action status. At that point we knew we had a lot of data, but we knew we weren’t using it efficiently.”

He also felt the 2011 implementation of a core curriculum, *Reading Street*, in kindergarten to second grade was a key factor. *Reading Street* was adopted as the core reading program throughout the district after district elementary school leadership teams completed the *Planning and Evaluation Tool for Effective Schoolwide Reading Programs* (PET-R) in 2010. The PET-R was required for schools participating in the MiBLSi network, which the district joined in 2010. The PET-R showed concerns with alignment in assessment, curriculum, instruction, and

professional development in the teaching of early literacy. With that process, coupled with decreasing student achievement, the district chose to purchase *Reading Street* as part of a collaborative effort of the county Intermediate School District. Mr. Kuch viewed the change as necessary to meet the needs of the ever-growing at-risk population. The same PET-R process was followed in 2013, and the district adopted *Reading Street* at the third and fourth grades also. Leading the implementation of the *Reading Street* curriculum created demands and opportunities that spurred Mr. Kuch's professional learning and development in literacy content knowledge.

When Mr. Kuch arrived at Elmore, the school and district were just beginning to build a multi-tiered system of support for literacy and to strengthen their core literacy teaching. As the MiBLSi model suggests, Elmore began building its systems to support and improve behavior prior to literacy by developing expectations in all areas of the building, teaching students explicitly, monitoring with use of data, re-teaching as necessary, and acknowledging when students met those expectations. It required staff to develop a common understanding of how to teach and respond to student behavior. It increased the intensity of support for students in need of more structure. After a year of establishing this system, the staff was prepared to begin building similar systems to address concerns with literacy achievement.

Although evidence of literacy subject matter knowledge was not often captured, Mr. Kuch demonstrated leadership behaviors in support of literacy LCK in general. He and his staff have built a culture that supports literacy achievement of students. Data Day is one segment of their overall system to increase student competence in literacy. Mr. Kuch advocated for organizing time and space in flexible

ways by reallocating interventionists' work and regrouping students to increase instructional time. Additionally, Mr. Kuch and his team have taken the cues of the district and established interventions to match the needs of as many Elmore Elementary students as possible.

Elmore currently offers a multi-tiered model of service delivery to all students and uses a 5-step problem-solving model (problem identification, define a hypothesis, plan an intervention, collect data, evaluate progress) to regularly respond to literacy outcomes and concerns. They have worked diligently with the district to not only create an assessment calendar, but to create spaces and opportunities to analyze and learn from data in collaborative teams. These routines inform how resources are allocated with particular attention to kindergarten through first grade students. Students are identified, research-based interventions are put in place, and progress monitoring is ongoing.

Mr. Kuch has seen that Elmore has a clear structure in place to use data when making instructional decisions. It begins by administering benchmark literacy assessments three times a year (fall, winter, spring) to identify students that may be at-risk based on a curriculum-base measurement or screener. Elmore uses multiple data points such as weekly and unit assessment data and diagnostic data to identify students who are to receive Tier 3 supports. Additionally, they analyze behavior data and attendance trends. Three times a year they host what is called a Data Day where a data team, along with the grade level teams, sit down and look at various grade level trends and outcomes. They establish Tier 1 goals within core instruction for all students. Tier 2 targeted interventions are adjusted, and it is determined what resources can be allocated to students needing the intensive supports of Tier

3. Because it is a K-4 system, there is a school-wide commitment to allocate sufficient support to intervene as early as possible in kindergarten and first grade student's development.

The core and comprehensive literacy program (Tier 1), that includes explicit and systematic instruction, is delivered in a 90 to 120 minute literacy block. Classroom teachers may provide intervention, but an academic interventionist might also deliver additional support. Elmore has three certified staff members that serve as academic interventionists and are dedicated to working with small groups of students to deliver research-based interventions aligned with core instruction. Throughout Tier 2 and 3 supports, student's progress is monitored using curriculum-based assessments sensitive to small amounts of progress along with assessments aligned with the research-based interventions or programs. This data is shared regularly with classroom teachers and reviewed at monthly grade level meetings. Adjustments may be made to student placements in interventions as well as the focus of the intervention. If student growth is not evident over time, fidelity checks of the system are performed. In some cases, a student's progress may be discussed with Elmore's Problem Solving Team which functions under a clear format that, similar to Data Days and grade level meetings, is data-driven. It allows for open communication to occur and gathers perspectives from multiple professionals in the school. It presses the team, as Mr. Kuch shared, *"to do a check on: Are you doing the right thing servicing-wise? ...Are you using the right program? What is the classroom teacher doing in the classroom? So, all those things are aligned."*

Table 3: Elmore's MTSS

MTSS: WHO DOES WHAT AND WHEN	
DATA COLLECTION	Classroom Teachers ○ Screening (3 x year) ○ Diagnostics (As necessary for struggling learners) ○ Formative Assessments (On-going for all students) Interventionists ○ Progress Monitoring (1 x week) ○ Diagnostic (per unit)
DATA ANALYSIS	Problem Solving Team ○ Data Day on overall trends, issues (3 x year) ○ Individual Student Reviews (1 x week) Grade Level Team ○ Review progress monitoring and predictive outcome data (1 x month)
INTERVENTION	Classroom Teachers ○ Small group reading instruction (4 x week, 15 mins for Tier 2 & 3 students) Interventionists ○ Small group, research-based, comprehensive program (4 x week, 30 mins. for Tier 3 students)
LEADERSHIP and DECISION MAKING	Literacy Interventionists ○ Changes to literacy instruction (as needed per the data) ○ Intervention implementation (3 x year) ○ Problem solving around data (monthly) Classroom Teachers ○ Changes to literacy instruction (as needed per the data) ○ Intervention implementation (3 x year) ○ Problem solving around data (monthly) Principal ○ Facilitate data conversations

Observing Literacy Knowledge and Leadership

As mentioned, three times per year Mr. Kuch hosts a Data Day where the data team, along with the grade level teams, examines grade level trends and outcomes. In late spring, at 50-minute “Data Day” dialogue sessions, first grade teachers, than third grade teachers, met as part of a team composed of Mr. Kuch, two academic interventionists, one special education teacher, the school social worker, and the school speech pathologist. These dialogue sessions were an opportunity to observe Mr. Kuch working with his teachers around literacy instruction and offered a window into his literacy content knowledge.

Both teams met in a room with parallel tables facing one another and a projection screen at the front. The grade level teachers were dispersed among the intervention team members while Mr. Kuch facilitated from the back of the room. The team entered the room (music was playing), retrieved coffee and snacks and quickly settled in. AT the first grade meeting, the social worker shared a comic to set the tone of looking at data and student progress. Mr. Kuch reviewed the agenda, which included:

- Establishing an outcome for the meeting,
- Sharing celebrations in the data,
- Tier 1 instructional goal setting,
- Reviewing the gap in the data,
- Behavior data analysis,
- Sorting students per the data for targeted instruction, and
- Program setting for students requiring intensive instruction.

Although the district’s instructional coaches established the agenda, it was Mr. Kuch that appeared to establish the tone for the work that would take place over the

course of the 50-60 minute session. He purposefully emphasized the necessity of focusing on the data at hand using the problem-solving model.

In both of the observed meetings, there were clear patterns in Mr. Kuch's contributions. For example, during the first grade observation, Mr. Kuch, made comments and suggestions on how to align literacy assessment and learning standards with established MTSS systems much more often than he commented on how literacy is taught and learned. There were twenty-one instances where he commented on or questioned staff about what the data was helping them understand but only seven instances where he commented on the specific strategies or methods used to teach literacy. Similarly, in a third grade meeting, the majority (21) of Mr. Kuch contributions to the dialogue addressed assessment and data while only seven concerned how literacy is taught and learned.

There were very few times during the dialogue sessions where Mr Kuch spoke on subject matter or literacy pedagogy, or more, specifically how literacy is taught by his classroom teachers and learned by Elmore students. On two occasions, he asked a staff member to explain why a student was "bombing" an assessment and followed his inquiry with questions concerning how skills were being taught.

Mr. Kuch seemed most confident working with data. He and his team asked all classroom teachers to sort their students according to the benchmark data prior to the Data Day. They were also required to calculate the median of their scores and a gap between the lowest and highest performing students. The established agenda focused on analyses of data and making decisions about instruction and intervention. Mr. Kuch asked questions throughout the session: "What is their data

telling us?” “What are some conclusions we can draw?” “Why do you not agree with the data?”, and “What is her accuracy and words correct per minute on the RCBM?”

Mr. Kuch pressed his team to establish thresholds and predictive outcome measures from formative sources of data to encourage the triangulation of the data that is collected.

Table 4: Observed Behaviors of Mr. Kuch Related to LCK

	Behaviors Indicating Knowledge of How Literacy is Taught and Learned	Behaviors Indicating Knowledge of How Assessments and Learning Standards Align	Behaviors Indicating Knowledge of MTSS
First Grade Meeting	5	10	15
Third Grade Meeting	2	11	11
TOTAL	7	21	26

Table 5: Indicators of Mr. Kuch’s LCK

Indicator	Evidence
1. Understandings of the teaching, learning, and assessing of specific components of literacy along a continuum from emerging sub-skills to fluency, plus comprehension, and vocabulary development	• Leads and supports implementation of comprehensive program of research based literacy instruction • References Big Five of literacy • Acknowledges a learning continuum exists • References skills such as knowing short vowels, comprehension, fluency, vocabulary
2. Ability to facilitate the improvement of literacy instruction for all learners, adults and children using this knowledge.	Facilitates conversations about data through: • Data Days • Grade Level Meetings • Student Study Team Meetings
3. Understanding of curriculum, materials and instructional strategies used to teach students alphabetic principal, phonemic awareness, phonics, vocabulary, fluency, and comprehension	Indicates the necessity of: • RAZ kids • PET-R to analyze curriculum • Research-based core/interventions • Small group and whole group • Pre-teaching and Re-teaching

Table 5 (cont'd)

4. Aware of the variety of assessments that can be used to evaluate the progression of students' skills including screening measures, formative assessments, and diagnostic tools.	Understands use of data: • Weekly data • Progress monitoring with curriculum-based measurements • Diagnostic testing • Running Records to measure fluency
5. Guide instruction and intervention within a system	Understands purpose of interventions: • My Sidewalks • Phonics for Reading • Place former Reading Recovery Teachers in interventionist roles
6. Guide professional growth staff needs in order to ensure effective literacy learning and teaching.	Supports staff development in: • Teachers Learning from Teachers support • MiBLSi

Knowledge of MTSS Systems

As he established the agenda, and set the tone, Mr Kuch made clear his focus on data, on processes for analyzing data and on data-informed decision-making about literacy instruction and intervention. He announced, "It is good for me to know how our students are doing so that I can measure the system." Throughout the meeting, Mr. Kuch kept the agenda progressing. He steered conversations from individual students to groups of students, "What are the common needs?" He specifically referred to the Problem Solving Team meetings. Moving beyond a single student's deficits can often deter the efforts in a context such as Data Day.

Mr. Kuch also clearly displayed knowledge of how supports are to be delivered in a multi-tiered model across the building and grade level. He reminded the teams that the resources from the literacy interventionists needed to be dispersed according to the needs expressed by the data: "We are unable to use interventionists to serve Tier II students because that maxes out our Tier 3 pull-out supports.", and

“We will need to create another group to meet the needs of more students.”

Additionally, Mr. Kuch reiterated the services in MTSS versus special education. The difference between the two systems is a key factor in the MTSS components of intervening early and believing that all children can be taught effectively.

Although Mr. Kuch established the need for a strong core instruction in literacy as well as the importance of intervention when students need additional support, he did not ask specific questions concerning the core literacy curriculum or key instructional strategies or the researched-based interventions selected by the district’s interventionists. Because he did not inquire, an opportunity to assess the effectiveness of these practices was possibly missed.

Case Summary

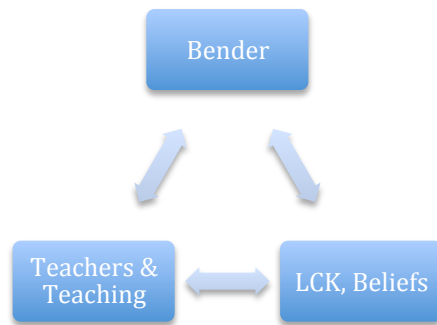
Looking across the data gathered on Mr. Kuch’s leadership at Elmore, it seems clear that he is aware of and attentive to the key features of a high quality literacy program as well as MTSS. But there is also evidence that he is more confident voicing opinions on some dimensions of literacy than others, and that his thinking often stems from the formal structures and processes of MTSS rather than literacy content knowledge. Mr. Kuch interacts within his instructional leadership via data and structures. Mr. Kuch recognizes that he is not a literacy expert. He perceives himself as having an average level of knowledge in literacy teaching and learning and is willing to learn from others whenever possible to gain more. He was quite candid about how purposefully open-minded he has been in this area as the school’s instructional leader. He felt like MTSS has had a great deal of influence on his literacy content knowledge, “I think it has been kind of a vehicle for me to again ask questions and allows my staff to share their data and classroom strategies.” He also

shared he felt that he brought to Elmore his knowledge of systems and structures that the staff was yearning to have in place, for example, a protocol for when and how data is collected. It seems clear that Mr. Kuch's knowledge of MTSS drove the development of his literacy content knowledge. He was honest about his limited training and education in early literacy teaching. To compensate, Mr. Kuch distributed his leadership to those in his school who did possess deep content knowledge. This is not unlike the observations of Mary Kay Stein (2003) as she studied school administrators and noted that, where administrators' knowledge is thin, an alternative way to ensure necessary expertise is to develop working groups, networks, and teams.

In summary, Mr. Kuch could speak to that fact that learning and teaching of reading is based on a continuum of skills. However, he was unable to elaborate, past defining them as the Big Five, on the sub-skills as well as the sequence of these. When he explained his understanding of instructional practices, it was basic and referred more often to participation structures such as small and whole group, rather than specific teaching strategies. Although he was a significant proponent of a data collection and analyses system, and could even explain the differences in the literacy assessments, he could not directly connect them back to how they influence a teacher or interventionists specific teaching. During large curriculum reviews and adoptions, Mr. Kuch was aware that his school and district needed research-based programs to reflect the current demands and increasing rigor of learning standards in the nation.

Case #2: Sybil Bender - Using LCK to drive MTSS

Figure 4: Sybil Bender's Leadership



Sybil Bender is the principal of a K-5 school in the small, rural community of Sprickston in central Michigan. Sprickston has a student population of nearly five hundred students. There are two other elementary schools after closing one 2 years ago. In the fall of the 2013-2014 school year, 60% of the students at Mrs. Bender's school were proficient in literacy according to the state's standardized assessment, the MEAP. Ninety percent of the fourth grade students in the school were proficient. Sprickston scores, in general, are typically above the averages for the State of Michigan.

While Mrs. Bender has been an elementary principal for nine years, this was the third year in her school and district. Mrs. Bender chose to change districts after working for nearly two decades in a large, urban system nearby. There, she was a literacy teacher for nine years, a literacy consultant for four year, and an administrator with the dual role of curriculum director and elementary principal for six years. As a literacy teacher and consultant, Mrs. Bender participated in extensive literacy training in programs such as Project READ, Orton Gillingham, Reading Recovery, LIFT, Michigan Literacy Progress Profile, balanced literacy, Lucy Calkins Writing, and Six Traits Writing. She served as a district trainer of several of those

programs throughout her career. It was this extensive professional development in literacy, and earning a Master of Arts in Language Acquisition, that lead her to the elementary school in Sprickston. The philosophies and practices of teaching literacy in this particular school mirrored her experiences and passions.

Mrs. Bender's first exposure to MTSS was through the county intermediate school district's effort to use the MIBLSi model to implement a response to intervention structure. She recalls a sense of fascination and inquiry with the MIBLSi assessment systems, as they were new to her practice. At the same time, she was relieved that MTSS might replace the antiquated special education referral model. But, because the urban district in which she worked at the time was quite large with over 20 elementary schools, implementation was slow and sporadic.

When she moved to Sprickston, she experienced an element of tension between the local and intermediate districts concerning the philosophy of how literacy was to be taught and learned. To her liking, Sprickston was the only district in the ISD that had not adopted the comprehensive core literacy program, *Reading Street*. Rather, the district implemented *Benchmark Literacy* and *Leveled Literacy Instruction* (LLI). Additionally, Sprickston continued to use assessments that the rest of the ISD had dropped and was slow to utilize AIMSweb curriculum-based measurements. Mrs. Bender attributes this autonomy to the strong direction of the district's curriculum director.

Benchmark Literacy teaches the components of balanced literacy and uses curriculum, instructional strategies, and assessments typical of a balanced approach. The curriculum uses a gradual-release model that incorporates spiral review of previously taught strategies. The instructional strategies are presented

in ten comprehension-focused units of instruction for each grade and include whole group mini-lessons and small group differentiated lessons. There are three weeks of explicit instruction and extension activities for each unit in areas such as phonics and word work. The *Leveled Literacy Intervention* parallels the small group approach to teaching literacy. It is designed as supplementary literacy intervention that supports teachers to provide powerful, daily, small-group learning in both reading and writing. Lessons combine reading, writing, and phonics/word study with an emphasis on teaching for comprehension strategies.

Although Sprickston did not implement MTSS precisely as prescribed by the intermediate school district, it certainly standardized its assessment and intervention processes to ensure multi-tiered systems to support literacy. Sprickston has a three-tier system with a first tier focus on strong core instruction. Supported by an intense commitment to professional development, classroom teachers take responsibility for “good” teaching that includes developmentally appropriate, small group instruction that is differentiated to meet the needs of diverse students. A great deal of integrated reading and writing instruction is delivered in a three-hour literacy block; that is uninterrupted in grades K-2. Bender and others feel strongly that their emphasis needs to be on the 80% of children for who Tier 1 instructional materials and framework works.

When students do not achieve core learning benchmarks they are recommended for Tier 2 support by Sprickston’s Title One literacy specialist. The literacy specialist focuses on first grade and works with students in small groups, but also one-on-one in Reading Recovery-instruction that focuses on individualized

instruction using error-analyses and strengths in emerging literacy skills. The literacy specialist also supervises two literacy aides who provide Tier 2 interventions.

From there, the special education teacher supports children recommended into Tier 3 interventions, mostly K-3 students identified during the school's Student Study Team meetings. Students receiving Tier 3 support are monitored for progress through classroom-embedded and diagnostic assessments from the established assessment system.

Assessment data is reviewed and decisions are made throughout the school year during Student Study Team meetings and grade level meetings. The system for collecting data begins shortly into the school year with school-wide benchmarking through curriculum-based measurements and continues with formative and diagnostic data collections until the end of the year.

When Mrs. Bender was observed in October, just five weeks into the school year, she was leading data dialogues or Student Study Team (SST) meetings. I was able to observe three grade level teams, kindergarten, first and fourth. Each team met for approximately an hour to review fall data collected within the first 6-weeks of the school year. Each team consisted of three grade level teachers, a teacher leader, the Title One Reading Teacher, Special Education Resource Room Teacher, school psychologist, speech therapist, and Mrs. Bender. They met in a conference room adjacent to the main office. They congregated around a long table with snacks near what they called the Data Wall. This represented the status of each student by grade level by way of a colored card signifying their reading level. There was a meeting schedule written on a marker board. Each team member came with

several data reports and forms for reviewing student data and establishing interventions for those below grade level in reading and math. The team prioritized student needs and utilized the support of the appropriate interventionist. As in most cases where a school is using MTSS, the systems for literacy are more advanced than they are for math. Therefore, across each grade level the conversations concerning literacy achievement were more prominent than those about math.

During the first grade SST, Mrs. Bender frequently and clearly communicated her strong understandings of how literacy is taught and learned (LCK), how to align assessment and learning standards (LCK) with systems established in the school (MTSS). For example, she suggested that a student receive further one-on-one intervention using a Reading Recovery model based on the student's data.

Although each meeting followed the same agenda and time frame, Mrs. Bender contributed less, in general, during the kindergarten meeting. In the fourth grade meeting, Mrs. Bender spoke most often to matters concerning the school's (MTSS) systems and very little of curriculum and instruction (IL) and how literacy is taught and learned (LCK). The variance in Mrs. Bender's behaviors from grade level to grade level is captured further below (Table 6).

Table 6: Sprickston's MTSS

MTSS: WHO DOES WHAT AND WHEN	
DATA COLLECTION	Classroom Teachers ○ Screening (3 x year) ○ Diagnostics (As necessary for struggling learners) ○ Formative Assessments (On-going for all students) Interventionists ○ Progress Monitoring (1-2 x month) ○ Diagnostic (weekly) Literacy Aides ○ Diagnostic (weekly)
DATA ANALYSIS	Data Day ○ Grade level student data & intervention planning meeting (3 x year) Grade Level Team ○ Review progress monitoring (1 x month) Student Study Team ○ Discuss individual student needs (1 x month)
INTERVENTION	Classroom Teachers ○ Small group reading instruction (4 x week, 15 mins for Tier 2 & 3 students) Interventionists ○ Small group instruction (4 x week, 30 mins for Tier 3 students) ○ One-on-One instruction (3 x week, 30 mins for Tier 3 students in K-2) ○ Supervise Literacy Aides Literacy Aides ○ Monitor computer-based program (daily) ○ Implement repeated practice strategy (3 x week)

Table 6 (cont'd)

LEADERSHIP and DECISION MAKING	<i>Literacy Interventionists</i>
	○ Intervention implementation (monthly) ○ Problem solving around data at grade level and Student Study Team (1 x month) ○ Modeling literacy strategies for teachers (On-going)
	<i>Classroom Teachers</i>
	○ Changes to literacy instruction (as needed per the data) ○ Intervention implementation (1 x month) ○ Problem solving around data (monthly)
	<i>Principal</i>
	○ Provide professional development for instruction (Throughout the school year) ○ Provide coaching of literacy strategies (During classroom visits) ○ Facilitate data conversations (1 x month)

Observing Literacy Knowledge and Leadership

Mrs. Bender demonstrated her knowledge of how literacy is taught and learned through various statements as well as inquiries of the teachers. For example, she commented that first graders ought to be taking books home daily and reading continuous text. She suggested to one teacher that a greater focus on guided reading lessons would benefit struggling students. When one of the classroom teachers mentioned a child's discrepancy between his reading and writing, Mrs. Bender turned to the speech therapist and asked if he worked on writing with her. When the speech therapist said that she did not, Mrs. Bender stated that the child needed to be receiving an intervention in addition to speech services that focused on writing. In the kindergarten meeting, Mrs. Bender asked the classroom teachers and reading teacher about an appropriate intervention for a student struggling with phonemic awareness.

Mrs. Bender was quiet throughout most of the fourth grade team, which had math data to discuss and share. Mrs. Bender was completely silent during this conversation; she did not make one comment for fifteen minutes. When conversation switched over to literacy data she was vocal, about a case of literacy fluency and the timing of students' correct words read in a minute. She directed the teachers to recall information they gained through their professional development in balanced literacy.

Mrs. Bender, at one point, established the importance of increasing one-on-one instruction for a struggling first grader. She also shared that she was impressed by the efficiency of one of the kindergarten teachers in teaching Concepts About Print in her classroom. She encouraged that individual to share her instructional strategies and invite others to observe her teaching.

Across the grade meetings, there was evidence that an extensive literacy background allowed Mrs. Bender to engage more specific conversation on how literacy is taught and learned from grade level to grade level

The teams were asked to bring data based on several assessments including the Slossan Oral Reading Test (screening assessment of word recognition) and the Benchmark Assessment System (diagnostic assessment to acquire specific reading level). Additionally, the school psychologist brought data from the universal screeners (curriculum-based measurements) administered to all students three times a year. Mrs. Bender was candid about her own hesitation to rely too heavily on the data drawn from the curriculum-based measurements. She shared that she believed that they need more telling data than that provided by universal screeners to make decisions, a view shared by her staff. She did pose questions of

triangulation between various data points as well as students' text level. When it was suggested that the use of the BAS data would "move kids along". Mrs. Bender, at one meeting, requested further diagnostic data such as Running Records, letter identification, Concepts About Print (CAP), and student writing samples. She referred to the Observation Survey and MLPP assessments that represent a former, pre-MTSS assessment system. One time, she reported out MEAP data in the fourth grade meeting. When the curriculum-based measurement data was interjected into the conversation, Mrs. Bender turned to the school psychologist, reading teacher, or resource room teacher to share their analysis.

Table 7: Observed Behaviors of Mrs. Bender Related to LCK

	Behaviors Indicating How Literacy is Taught and Learned	Behaviors Indicating How Assessments and Learning Standards Align	Behaviors Indicating Knowledge of MTSS
First Grade Meeting	6	9	17
Kindergarten Meeting	5	7	1
Fourth Grade Meeting	4	4	12
TOTAL	15	20	30

Table 8: Indicators of Mrs. Bender's LCK

Indicator	Principal Evidence	
1. Understandings of the teaching, learning, and assessing of specific components of literacy along a continuum from emerging sub-skills to fluency, plus comprehension, and vocabulary development	Understands literacy sub-skills: • Letter identification • Phonemic awareness • Directionality • One-to-one match • Phonics • Read to self stamina • Informational text/reading • Self-monitoring/correcting	• Fluency • Comprehension • High Frequency Words • Reading continuous text • Multi-syllabic words

Table 8 (cont'd)

2. Ability to facilitate the improvement of literacy instruction for all learners, adults and children using this knowledge	Facilitates conversations about data: • Data Days • Grade Level Meetings • Student Study Team Meetings • Content Area Meetings	
3. Intimate with the curriculum, materials, and instructional strategies used to teach students alphabetic principal, phonemic awareness, phonics, vocabulary, fluency, and comprehension	Teaches and models instructional resources and strategies: • Daily Five • Guided reading • Core curriculum/instruction • Small group • Close and Critical Reading • Balanced Literacy	• One-on-one instruction • MAISA writing • BAS training • Guided Highlighting • Lucy Calkins • Read 180 • Reading Apprenticeship
4. Aware of the variety of assessments that can be used to evaluate the progression of students' skills including screening measures, formative assessments, and diagnostic tools.	Understand use of data: • AIMSweb/curriculum-based measurements • Progress monitoring • Diagnostic – digging deeper • Running Record analyses • Embedded assessment into instruction • MLPP • SLOSSAN • DRA	
5. Guide instruction and intervention within a system	Holds staff accountable for high quality instruction and intervention: • Leveled Literacy Intervention • Sacred literacy block • Repeated practice • Success Maker	• Reading Recovery • Six Minute Solution • Place former Reading Recovery Teachers in interventionist roles
6. Guide professional growth staff needs in order to ensure effective literacy learning and teaching	Supports, arranges, and participates in staff development to increase effective literacy instruction: • MAISA writing training • Daily Five PD	• What Works Clearinghouse • Read 180 Training • Reading Apprenticeship Training • Richard Allington

Table 8 (cont'd)

	• BAS training • Guided Highlighting training • Balanced Literacy Training • Lucy Calkins training	
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Knowledge of MTSS Systems

Mrs. Bender consistently demonstrated understandings of the MTSS within her school. Establishing frequent opportunities for teachers and teams to review and analyze data in order to adjust instruction and intervention is the clearest evidence. The fact that she has developed a coordinated team approach to progress monitoring and intervention is also evidence of her MTSS knowledge. Throughout the SST meetings, she often referred to students in the context of where they fell in the three-tier model according to the data. She understood how targeted and strategic instruction grew in intensity across tiers two and three and how resources needed to be dispersed accordingly. Mrs. Bender introduced the data wall to her school as a structure to track student progress. She acknowledged that the MTSS was not as developed in the area of math indicating her understanding of the necessary components to be truly effective.

During the first grade SST, Mrs. Bender inquired about a specific struggling student. She asked the teacher and team about possibly evaluating him under the guise of special education suggesting that the student's time in intervention would increase if he qualified. Although MTSS is designed to intervene early with or without special education eligibility, these supports remain a necessary part of the

MTSS. It is essential that a principal help guide a staff when determining where a child's needs fall within the tiers of support.

There was limited discussion about the core literacy instruction and curriculum. Although Mrs. Bender shared in the debriefing interview that she thinks solid, classroom instruction is a necessity she did not use the SST meetings as a venue to express this to staff.

Overall, Mrs. Bender participated in the first grade SST meeting more than the following two meetings and made more contributions to the discussion indicative of her literacy knowledge and leadership. She interjected far less in the kindergarten meeting and less in the fourth grade meeting that involve discussion of math assessment data.

Case Summary

There is significant evidence of Mrs. Bender's literacy content knowledge that she has spent a career building, yet she shared she still will always have more to learn about literacy and building quality systems of support. Her charge, as she sees it is, "to push the thinking of her staff to see how they can articulate and show that there is an MTSS structure in place and it's not radically different than what everyone thinks it is." She is confident that her literacy content knowledge has been the main driver of her approach to building MTSS at Sprickton Elementary. Ms. Bender interacts with her instructional leadership via beliefs, knowledge, and passion for early literacy.

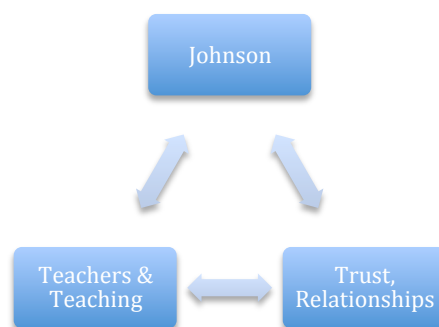
From the literature, principals can and should create a culture and environment that promotes literacy. Mrs. Bender does this unquestionably. First and foremost, she helps to alignment curriculum and provides time and space for

teacher collaboration around current research-based practices. These qualities enhance their school's MTSS for literacy learning.

Mrs. Bender, during every phase of data collection, demonstrated a deep understanding of literacy teaching and learning. She spoke at length about the sub-skills, the order in which they emerge, and the potential concerns when a student struggles with one or more. Mrs. Bender offered suggestions for instruction and intervention such as blending, segmenting, repeated readings, and explicit vocabulary instruction. She practiced using screening data but was able to explain at length the type of information learned through the use of diagnostic assessments that dig deeply into students' skills. Mrs. Bender was responsive to her student and staff needs by bringing in training and professional development that supported current trends in literacy instruction, assessment, and intervention.

Case #3: Eve Johnson - Using instructional leadership to drive LCK and MTSS

Figure 5: Eve Johnson's Leadership



It is safe to say that the foundational structures of MTSS have infiltrated schools across the county. Even the largest district in the county has participated with the ISD in some of the learning around MTSS. In the case of Even Johnson at Woodcraft Elementary, we observe another event they term Child Study Team (CST)

that occurs the second Tuesday of each month at Woodcraft and precedes a district level CST two weeks later. Although it adopts a different purpose than in the former context, this problem-solving mindset and use of data to offer tiered support is common among schools that implement MTSS. Ms. Johnson, the principal of three years, serves a K-3 elementary school in a large, urban district. Prior to assuming this role, Ms. Johnson was a classroom teacher in Colorado, Indiana, and North Carolina. She taught fourth through seventh grades during the various assignments. She moved to Michigan and was a fifth grade classroom teacher for ten years in her current district. She earned a Master degree in Literacy Instruction that lead her to accepting a Reading First coaching role which she did for five years. Ms. Johnson took a hiatus from the coaching position for one year to return to the classroom. She quickly found that she was a match for coaching as she felt she had honed her skills in working with adults. She returned to coaching, this time as a Response to Intervention coach. The objective was to help schools implement RtI/MTSS across this vast district. Ms. Johnson was able to attend a portion of the MiBLSi trainings to represent her district. Coaching roles were later minimized, and she believed she could have a greater impact on multiple students and pursued a principalship at Woodcraft Elementary.

Woodcraft shares resources with over 20 other k-3 elementary schools. There was a significant amount of movement and change within the district including closing buildings and merging grade levels to maximize space over the past three years. Stein's student population is quite transient according to Ms. Johnson. Student achievement, according to the 2013-2014 MEAP, is lower than the principal and staff would prefer. Third graders proficient on the literacy portion of the test

was 43%.

Woodcraft had a portion of the MTSS work in place when Ms. Johnson arrived. A lag in implementation could be due to size of the urban district and its impact on the pace of changing structures in general. Although the systems may not be as developed as those in Hattieville or Sprickton, Woodcraft Elementary does have established systems for collecting and analyzing data. All students are assessed at the beginning of the school year with a universal screener and diagnostics as necessary to ensure that students that aren't performing are brought to the immediate attention of the staff. They monitor progress the most at risk students with DIBELS in literacy every two weeks. For first, second and third graders all students are given a spelling inventory. Teachers administer the DRA to determine each student's instructional and independent reading levels. For continued diagnostic data collection, staff at Woodcraft may use specific parts of MLPP. All of this data is shared and analyzed at grade level meetings and, when a child is not showing adequate progress, at Child Study Team meetings where a diverse group of staff try to problem solve individual students' concerns.

When students are identified as below grade level, Woodcraft uses research-based interventions. They are thoughtful about such interventions with fidelity. Ms. Johnson or the literacy teacher may check for that if there is a concern. Part of their tiered supports includes classroom teachers offering intervention. Some at-risk students also receive intervention from the literacy teacher, the resource room teacher, or the speech therapist. This may be done with small groups, but could also look like modeling strategies for whole-class interventions. As students reach benchmark, the groups are flexible for intervention. Of course, no intervention can

replace high quality, core, Tier 1 instruction. Woodcraft's teachers engage in regular professional development about instructional strategies and interventions.

Classroom teachers at Woodcraft Elementary use *Treasures* as their comprehensive core, Tier 1, literacy program. It is a research based, comprehensive reading language arts program for grades kindergarten through sixth grades. High quality literature is coupled with explicit instruction and student practice. It is considered a balanced literacy program with reading delivered in whole group and small group settings. It is comprehensive in nature with shared and independent reading, phonics and word study, and writing. This core program was adopted by the large, urban district after the era of Reading First, which did not have a balanced literacy approach. It became clear to district administration that the growing transiency called for a consistent literacy program in the hopes of offering continuity to students who moved within the large district.

Woodcraft also has systems in place to try to intervene early. Many kindergarteners arrive to school below grade level so that was one of the first places they start. They acknowledge that many of their students will come to school without basic building blocks of literacy development. They plan for this and have accommodated for such needs within the whole classroom instruction.

Table 9: Woodcraft's MTSS

MTSS: WHO DOES WHAT AND WHEN	
DATA COLLECTION	Classroom Teachers ○ Benchmarking (3 x year) ○ Diagnostics (Students below benchmark and students new to the school) ○ Unit Tests (End of units) ○ Progress Monitoring (1 x week for Tier 3 students) ○ Diagnostic (On-going for Tier 3 students) Interventionists
DATA ANALYSIS	Child Study Team ○ Problem solve student concerns (1 x month) ○ Refer students for special education evaluation Grade Level Team ○ Discuss instruction strategies (1 x month)
INTERVENTION	Classroom Teachers ○ Incremental Rehearsal (4 x week, 10 mins for Tier 3 students) ○ Sounds and Letters for Readers and Spellers (a few x week, small groups of Tier 2 & 3 students) ○ Say-It and Move-It (a few x week, small group for Tier 3 students) Interventionists ○ Small group at instructional level (a few x week, 30 mins for Tier 3 students)
LEADERSHIP and DECISION MAKING	Literacy Interventionists ○ Intervention implementation (3 x year) ○ Problem solving around data at Child Study Team (2 x month) ○ Modeling literacy strategies for teachers (As needed) Classroom Teachers ○ Surface concerns about student learning and share strategies Principal ○ Provide professional development for interventions and instruction (intermittently throughout the school year) ○ Provide coaching of literacy strategies (during classroom visits)

One of the systems, as shared by Ms. Johnson, that Woodcraft has evolved is the Child Study Team. The CST at Woodcraft Elementary is in place to discuss the lack of progress of individual students (behaviorally and academically), establish interventions in and outside the classroom setting, and to ensure that students do not “fall through the cracks.” It also allows for monitoring of those same students to occur thereafter, possibly even referral for special education evaluation. After the monthly building CST, Ms. Johnson takes concerns to a district level Child Study Team two weeks later to keep district personnel abreast of students who may need special education evaluations. The school’s CST meeting takes place after school monthly for approximately an hour. The team is composed of Ms. Johnson, a facilitator who is a first grade teacher, two kindergarten teachers, an additional first grade teacher, a second grade teacher, a second/third grade split classroom teacher, a third grade teacher, the school counselor, speech therapist, literacy and math Title One teacher, and the special education teacher. They gather in the Title One teacher’s room around several tables. They use a list of the various students’ names, a notebook to track students that are discussed, and completed Intervention Profiles to guide the conversation. This particular CST discussed the concerns of three students from the same first grade classroom. (It should be noted that the purpose of Woodcraft’s CST does vary in comparison to the grade level data conversations that took place in the other subjects’ schools.)

Table 10: Observed Behaviors of Ms. Johnson Related to LCK

	Behaviors Indicating How Literacy is Taught and Learned	Behaviors Indicating How Assessments and Learning Standards Align	Behaviors Indicating Knowledge of MTSS
Child Study Team	10	1	9
TOTAL	10	1	9

Ms. Johnson, throughout this CST, demonstrated a limited knowledge of how literacy is taught and learned and the components of MTSS directly. Her knowledge of aligning assessments and learning standards and curriculum/instruction was even more limited. When she did participate, she predominantly pressed the student's teacher and team members about potential special education testing. She asked questions: "Is he at risk of testing out?", "Is he showing signs of disabilities other than speech?", "Do we need to take him to the district team?", "Is there some disability that causes this?", "Since he is struggling in the same way, we wonder about special education." Ms. Johnson's overriding concern with special education evaluation became apparent shortly into the meeting and lingered throughout the duration of the conversation about each student.

Observing Literacy Knowledge and Leadership

During the observation, Ms. Johnson referenced a particular intervention, Incremental Rehearsal, the staff has adopted as their "go-to" strategy when a child is struggling in literacy or math, which involves repeated practice of a concept or skill. Ms. Johnson inquired about the effectiveness of this strategy for a first grade student struggling with phoneme segmentation, "Sounds and letter worked for phoneme segmentation?" While discussing the same student, she also asked the team if they thought the correct interventions were in place to address the student's needs. As

the team focused on another student, Ms. Johnson asked how the incremental rehearsal was going with site words. She then asked the team, “Why is it important to know site words? Are there some kids that will always need to decode site words?”

I failed to see Ms. Johnson display a deeper sense of her understanding of the teaching and learning of literacy. The knowledge she did demonstrate remained focused on a single intervention of Incremental Rehearsal, an evidence-based practice where a student is presented a flashcard containing unknown items added to a group of known items. The premise of the strategy is that known information along with unknown allows for high rates of success and can increase retention of the newly learned items. Although the staff has invested in the professional development to implement this new intervention with fidelity, Ms. Johnson had multiple opportunities to share her knowledge gained as a district literacy coach.

Ms. Johnson has been leading the charge to make CST a viable problem solving space to support students. Teachers are asked to capture students’ current performance on an intervention profile that has evolved under Ms. Johnson’s leadership and in collaboration with the CST facilitator. A first grade teacher would note DIBELS Benchmark data from the fall in the areas of letter naming fluency, phoneme segmentation fluency, and nonsense word fluency. A Developmental Reading Assessment level, a site word score, and a writing sample score is also requested. Lastly, teachers list any interventions the student is getting at the time of the CST. Additionally, other team members working with the child such as the Title One teacher or the speech therapist bring data about student progress. During the CST meeting, the classroom teacher shared a portion of the data, however, Ms.

Johnson only once referenced aligning assessments with instruction. She asked the speech therapist if the student's goals seemed to reflect the particular struggles mentioned.

Table 11: Indicators of Ms. Johnson's LCK

Indicator	Principal Evidence	
1. Understandings of the teaching, learning, and assessing of specific components of literacy along a continuum from emerging sub-skills to fluency, plus comprehension, and vocabulary development	Understands literacy sub-skills: • Big Five • Phonemic awareness (stepping stones for fluency and then comprehension) • Phonics • Alphabetic Knowledge • Letter Sounds • Segmenting	• Fluency • Comprehension • Oral language • Systematic design of core - continuum
2. Ability to facilitate the improvement of literacy instruction for all learners, adults and children using this knowledge	Facilitates conversations about data: • Grade Level Meetings • Child Study Team Meetings	
3. Intimate with the curriculum, materials, and instructional strategies used to teach students alphabetic principal, phonemic awareness, phonics, vocabulary, fluency, and comprehension	Understands instructional methods: • Literacy Block • Whole group • Core curriculum/instruction • Small group • Flexible groups • Research-based	• Direct Instruction • Explicit Instruction • LETRS for Readers & Spellers
4. Aware of the variety of assessments that can be used to evaluate the progression of students' skills including screening measures, formative assessments, diagnostics	Understands use of data: • DIBLES/curriculum-based measurements • Progress monitoring • Diagnostic • Universal Screeners • MLPP • DRA	
5. Guide instruction and intervention within a system	Promotes interventions: • Targeted intervention • Incremental Rehearsal	

Table 11 (cont'd)

6. Guide professional growth staff needs in order to ensure effective literacy learning and teaching	Ability to seek professional resources in literacy: • LETRS training • Incremental Rehearsal training • Tim Rasinski • Richard Allington • Building wide focus on literacy • Trust knowledge/relationships • Reading First
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Knowledge of MTSS Systems

Ms. Johnson did demonstrate knowledge and practice of the MTSS within her school albeit the structures are fairly new. Prioritizing CST and using the problem-solving model to support student in a tiered system is evidence of this. During this observation, specifically, Ms. Johnson displayed her knowledge of a system by acknowledging how the various tiers should support a student that is not responding to intervention. She referenced strong Tier 1, core literacy instruction as the most essential consideration, “We know that kids who are making progress, and kids who are not making progress, must have strong core instruction first.” From there, she encouraged the Incremental Rehearsal and special education support/eligibility. Although Ms. Johnson referred to the importance of strong core literacy instruction, she did not share any knowledge of what that entails. One teacher leader shared that Ms. Johnson brought to Stein a knowledge of literacy through her experiences as a Reading First and RtI coach, provides guidance about instruction, and has a higher level of accountability and expectations for quality literacy teaching than the former principal.

Case Summary

All in all, Ms. Johnson’s most considerable participation during the CST

reflected a concern to have students, or refrain from having students, tested for special education eligibility. This was a contrast to the other principals who did not invite that possibility into their dialogues about students.

Ms. Johnson sees her role at Woodcraft “to be supportive and the pusher of all teachers growing in their practice and giving them the okay to feel alright that we need to move forward and get better at teaching.” In the first two years as the principal, Ms. Johnson describes herself as “the leader of certain things that she now trusts others to lead.” This was after she established her knowledge of literacy and gave teachers support to build their own literacy knowledge. She still feels very knowledgeable and is the person to check in with, putting things in place. For example, Ms. Johnson stated using the incremental rehearsal was the message from her that they all need to do it. “Building relationships with my teachers really took a long time; having them trust my knowledge; trust that I would support them,” she shared. Several times, Ms. Johnson refers to relationships as an integral part of job to increase the literacy content knowledge of others and to build MTSS throughout Woodcraft Elementary. “The best way to work with adults is to first begin with relationships and have people trust you so that you can help them get better,” said Ms. Johnson.

It is clear that Ms. Johnson is a motivated instructional leader and uses this role in the principalship as a platform to increase the literacy content knowledge across the building while at the same time implement MTSS structures. She relies on her relationships with staff to accomplish the work at hand.

Spillane et al. (1998) and Blasé and Blasé (2000) may agree as Ms. Johnson strives for an influence relationship that motivates, enables, and supports teachers’

efforts to learn about and change their instructional practice. She prioritizes making suggestions, giving feedback, supporting collaboration, and providing opportunities for professional development, all of which are indicators of instructional leadership. She relies on the relationships with staff that she has built over time to ensure growth at Woodcraft Elementary.

Ms. Johnson's use of literacy content knowledge to influence MTSS was a surprise. Although she spoke to and acknowledged the continuum of literacy sub-skills (alphabetic knowledge, phonemic awareness, phonics, vocabulary, etc.), her understanding of these did not appear to influence a variety of teaching and intervention strategies. Ms. Johnson spoke of different types of assessments and their purposes, but again, this did not translate to the broader instructional systems needed to meet the vastly different needs of students. She did, however, use teacher analyses of data to respond with training in one strategy to be used as an intervention. Clearly MTSS should include a large bank of strategies and interventions for teachers and specialist to try.

Cross Case Analysis

Among the three cases, there were similarities and differences in how the principals executed their leadership to build MTSS. I explore what seemed similar and shared in these leader's use of LCK to implement MTSS, what seemed different, and evidence of how MTSS pushed them to further develop their LCK knowledge. I conclude with broader observations from the study.

Similarities

Research-based instruction and intervention is crucial when designing MTSS.

When a principal has limited LCK, there is a chance of implementing instructional strategies and interventions that are less fitting and effective. Across the cases, the principals used their LCK to consult literacy research and experts; they learned from these resources and shared them with staff to build common knowledge.

Table 12: Cross Case Analyses of Similarities

	KUCH/BENDER/JOHNSON
ANALYSIS 1: Similarities of the profiles of principal knowledge	
Perspectives on research and practice	Consult literacy research and experts in the field
Continuum of literacy skills	Acknowledge that there is a continuum of literacy skills to learn and teach
Leading professional growth	Share resources with teachers
ANALYSIS 2: Comparisons of principal MTSS practices	
Assessment	Provide time and space to analyze data Advocate for assessment to align with learning standards
Intervention	Promote interventions that align with core instruction
ANALYSIS 3: Comparisons of how LCK and MTSS interact within principal instructional leadership	
Interactions	Expect comprehensive core literacy program is foundation of Tier 1 instruction Foster literacy rich culture within school systems and structures

It was refreshing to find evidence that all three principals used their LCK, albeit at different levels, to design MTSS. Each one strategically fostered a culture that promoted the literacy achievement of students. Each one created common understandings of the importance of strong literacy instruction. And, each one established a school wide focus on literacy, clearly integrating literacy achievement

goals into their School Improvement Plans. Staffs were aware that literacy was a priority throughout the school.

One way each leader established this culture within MTSS was by organizing time and space in flexible ways to emphasize literacy instruction. This was evidenced by the range of opportunities (i.e. data days, grade level meetings, child study team meetings) staff members were offered for analyzing data and for sharing strategies. Additionally, each principal secured some flexibility in scheduling that afforded struggling students increased literacy instruction. Mrs. Bender spoke of time in student's daily schedule to visit the Success Lab to work with the Literacy Aides. Four times weekly, Mr. Kuch expected teachers at each grade level to find a common thirty minutes outside their literacy block (Team Time), to share and group students for additional literacy instruction.

One early indicator of these principal's LCK was their understandings of the foundational necessity of a strong and comprehensive literacy program that coherently organized content, pedagogy, assessment and the roles of teachers and students. While each school used a different core program, each principal referenced the developmental and systematic progressions of their program from skill to skill and grade to grade. The principals referred to this core curriculum as the basis of Tier 1 instruction in the MTSS of each school.

Aligning literacy assessments and learning standards is also indicative of LCK. In each case, the principals pointed to school level data systems that gathered individual student literacy outcomes on key learning standards. Each system supported curriculum-based measurements (AIMSweb or DIBELS) of each student's progress on skills ranging from letter naming fluency to reading fluency. Generated

three times per year, they referred to it as benchmark testing. A related similarity was the practice of triangulating formative assessment and diagnostic data to enrich their view of student's progress and mastery. So, the three leaders shared understandings of the value of aligning assessments to the targeted instruction within an intervention and also of the value of progress monitoring to ensure that interventions were effective.

Another shared perspective and understanding was the importance of establishing clear systems of interventions. All three voiced a belief that interventions were to be research-based, matched to the needs of the students, and aligned with core instruction in the classroom. For example, when discussing interventions, Mr. Kuch stated:

“... whatever [interventionists are] doing with them for that extra 30 minutes, [students] have to be able to transfer that back into the classroom. And one of the most effective interventions we're finding, is the pre-teaching of what they're going to learn or the re-teaching of what they've just learned.”

Mrs. Bender expressed her desire to have teachers develop their understanding of interventions that complimented instruction in the classroom that also focused on guided reading, writing, and assisted writing.

Each principal offered specific examples of interventions used in their school and where and how they were being applied. For instance, Mrs. Bender discussed an intervention called *Word Cards* used with students lacking fluency in reading site words. Mr. Kuch advocated for the intervention *My Sidewalks* that accompanies *Reading Street*. Ms. Johnson referred to incremental rehearsal to support students struggling with letter sounds. Additionally, all three leaders voiced expectations

that their teachers have well-established classroom interventions at hand as a first response to student struggles. When students posed needs beyond that, staff interventionists were then utilized. It is also worth noting, each principal saw that all their interventionists had served as literacy specialists or special education teachers, breaking with past norms that might have used general seniority, and not literacy expertise, as the main selection and hiring criteria for such a position. All of these perspectives and behaviors demonstrated these leaders' LCK.

A sign of perhaps more developed LCK is active knowledge of how literacy skills are scaffolded and learned over time. This requires understandings of the continuum of skills a child must develop to become a competent reader.

Two principals, Mr. Kuch and Ms. Johnson referred to the National Reading Panel's Big Five in early literacy development: alphabetic principle, phonemic awareness, phonics, vocabulary, and fluency. The principals referenced these skills when discussing implementation of systematic and developmentally appropriate core instruction and the need to match their MTSS to it across the grades. Mrs. Bender explained her understanding of all of these skills.

Children begin their learning of literacy with alphabetic knowledge, letter identification and letter sounds. This is known as phonemic awareness and phonetic understanding. Each letter has a symbol. Each letter makes sounds. Letters can work together to make more sounds. They use this knowledge to learn to blend and segment letters and the sounds that they make.

The three also recognized how, as children develop into emerging readers, some of those skills are replaced in importance by student motivation and comprehension.

Each principal communicated some understanding of how instructional strategies, methods, and practice change as students' skill sets progress from pre-reading to emerging reading to reading. They generally described differences

between literacy instruction in their lower and upper elementary classrooms. For example, holding expectations that kindergarten teachers plan and execute lessons in phonemic awareness and phonics and that teachers in all grades include vocabulary in daily literacy instruction.

Pedagogically, the three were unanimous in expressing the need for small group instruction that allowed flexible groupings according to need. This method and strategy carried over to the design of interventions and their MTSS in general. Ms. Johnson explained small group literacy instruction, referring to the development of skills:

When you go into K-3, you absolutely see the stepping-stones from phonemic awareness through fluency through comprehension. I want to see whole group as part of their whole literacy block where grade level skills are taught. I also want to see small group instruction that focuses in on what that specific group of students need at that particular time in their literacy development.

Overall, there were significant similarities in how these leaders brought LCK to the design and implementation of their MTSS. All three principals referenced literacy research, sought to build a schoolwide culture of literacy achievement, demonstrated a consistent press on the quality and alignment of literacy curriculum, instruction and assessment, pointed to the use of data and interventions, and spoke to the value of collaborative efforts by teams.

Differences

Of course, there were differences in the principals' LCK, their MTSS practices, and, ultimately, how the two interacted under the leadership of each individual. Summarized below are the most significant differences across the cases.

Table 13: Cross Case Analyses of Differences

	KUCH	BENDER	JOHNSON
ANALYSIS 1: Comparisons of the profiles of principal knowledge			
Perspectives on research and practice	Voluntarily implemented MiBLSi, in line with district	Use Whole Language, Reading Recovery, in contrast to nearby district trends	Trained Reading First, mandated by district
Continuum of literacy skills	Familiarity of continuum of skills but limited in detail	Knows detail on each skill: how they build on one another, when they should be taught and assessed	Knows detail on some of the skills and when they are taught
Leading professional growth	Supports teachers learning from teachers	Models specific strategies in literacy and writing instruction in the classroom	Supports training in a few interventions/ strategies

ANALYSIS 2: Comparisons of principal MTSS practices			
Assessment	More reliance on curriculum-based measurements	More use of diagnostics	Some reliance on curriculum-based measurements and diagnostics
Intervention	Classroom teachers, small group (tier 2 & 3) Interventionists, small group (tier 3)	Classroom teachers, small group (tier 2 & 3) Interventionists, small group and 1-on-1 (tier 3) Literacy Aides	Classroom teachers, whole class and small group (tiers 2 & 3) Interventionists, small groups (Tiers 3)

Table 13 (cont'd)

ANALYSIS 3: Comparisons of how LCK and MTSS interact within principal instructional leadership			
Interactions	Heavily monitor systems Bases leadership on desire for structure	Share expectations for assessment, instruction, intervention Bases leadership on literacy knowledge	Confirming special education referral Bases leadership on relationships

One source of differences was the principal perspective on research-based instruction and intervention. First, they consulted different research and different experts in the field of literacy. Mrs. Bender relied heavily on her own training and professional development offered by the local intermediate school district ten and twenty years ago. This included learning in Reading Recovery, Balanced Literacy, and LIFT. She consulted authors and researchers such as Richard Allington and the team of Fountas and Pinnell. Whereas, Mr. Kuch utilized his learning from the more recent trainings offered through the ISD and MiBLSi. Ms. Johnson referenced research from both eras. Because the research they saw valid varied, selection of interventions within MTSS varied as well. Mr. Kuch described several interventions that promote an increase in oral reading fluency. Mrs. Bender talked of text-based intervention that avoided the isolation of literacy skills, and Ms. Johnson mentioned one intervention that focused on rote practice and memorization of isolated literacy skills.

While the three principals demonstrated knowledge of high quality literacy programs overall, their depth of knowledge of how literacy skills are taught and

learned varied. Amongst the three leaders, Mrs. Bender voiced the most developed and extensive knowledge of how literacy is taught. She spoke more fluently and precisely about alphabetic knowledge, phonics, and phonemic awareness. For example, here, in speaking to the particulars of phonics learning in the early grades:

There is a phonic component. They focus more on the phonics piece at the younger grades, but the research shows that if you teach ten minutes a day on explicit phonics instruction, it is probably enough for these students. They also teach phonics in writing.

From kindergarten and through first grade, students transfer from isolated pre-reading skills, such as letter and sound identification, to blending and segmenting letters and sounds, to decoding with ease, to finally reading. Mrs. Bender also spoke of this:

Teachers are comfortable teaching phonics within the writing. They're practicing phonics within their word work, so they're getting lots of phonics during the day. They move from this to blending and segmenting words and parts of words. Fourth and fifth grades shift the focus to sustained amounts of time for reading and building comprehension.

In contrast, many of Mr Kuch's comments on literacy instruction were more general and perhaps also more structural, as they often focused on grouping versus specific literacy skills:

(If I visited a class) I would be looking for them to be doing some type of whole group instruction that included a lot of the skills that they would be going off doing independently on their own in their centers or in small groups.

He spoke about the role of a scheduled literacy block that is preserved for prolonged literacy instruction without interruptions from recess or trips to the library, etc. In contrast, when Mrs. Bender talked of literacy instruction she broke it down to not

only instructional methods but also specific skills to be learned by students learning to read:

So those are five components, I would say (I should see) in kindergarten through third, the Daily Five (read to self, read to partner, work on writing, listen to reading, and word work/phonics), and then in fourth and fifth grade the focus shifts to longer sustained amounts of reading and building comprehension.

Ms. Johnson described the development learning in terms of stepping-stones from kindergarten to third grade,

...from phonemic awareness through fluency. I'm going to see kids engaged in oral language, phonemic awareness, explicit instruction in letter sounds, and attaching phonics to that. So we see how they're starting to fit together.

Differences in these leaders depth of knowledge were also evident in their use of MTSS assessment systems. While each principal spoke to the importance of having multiple measures of student growth in literacy, the value they gave to specific assessments varied. It was clear, for example, that Mr. Kuch and Ms. Johnson found the curriculum-based measurements (DIBELS, AIMSweb) used three times each year valuable and telling. Team conversations during their respective data days and meetings referred to these often to determine a student's growth throughout the school year. Based on her more extensive knowledge and experience with literacy, Mrs. Bender held a different view of their value:

Children are over-identified with AIMSweb screening. It's very clearly stated in all of the What Works Clearinghouse data; everything you read about screeners. This school was very much against screener. We refused to participate in the screening. We were digging deeper with benchmark assessments with all students, not just a few students.

Depth of knowledge may also be evident in the type or range of diagnostic assessments built into their MTSS data collection process. Mr. Kuch mentioned unit

and weekly assessments that aligned with their core reading curriculum. Mrs. Johnson named sub-tests of the MLPP such as letter ID, rhyme, and phonemic awareness. She also mentioned the DRA. Mrs. Bender, on the other hand, described their use of 5 different assessment tools: running records, BAS, SLOSSAN, MLPP, and DRA. All of these are diagnostic in nature and able to dig deeper into what a child knows and can do.

There were evident differences in how leaders' LCK influenced MTSS. For example, each principal had different expectations of the assessments teachers should use within their data collection system. The principals with greater LCK expected teachers to collect more diagnostic literacy data on each student. This provided for deeper analyses of students' strengths and concerns as readers whereas, the principal with less LCK depended on screening measurement data for all students and diagnostic data for only some of the struggling students.

Principals also varied in what they may expect to see while observing literacy instruction. Mrs. Bender and Ms. Johnson shared how specific skill teaching and participation structures (i.e. small group, whole group, individual instruction) worked together throughout a block of literacy instruction. Mr. Kuch spoke generally about the structure of a literacy block but shared little about his expectations for what was being taught during this time.

Finally, we can speculate that the principal with the greatest LCK situated in the school district with more advanced support, versus a district with slower developing supports, likely has more advanced MTSS resulting in greater overall student achievement. Intervention can be more targeted as a consequence of collecting deeper, more diagnostic data, for example. It is not to say that a principal

is incapable of building strong and effective MTSS with less LCK. If a principal willingly acknowledges a lack of background and experience in literacy, and embraces shared leadership, systems can function smoothly and students can receive necessary supports to learn to read.

Did Implementing MTSS Strengthen Principals' LCK?

Although not an original research question, many of these leader's comments invited inquiry into the *interactions* of leader content knowledge and development of MTSSs. That is, did implementing MTSS push, enrich or challenge these principal's LCK? For instance, some evidence suggested that pressures to implement MTSS may have expanded their awareness and use of best practice literatures and resources such as the National Reading Panel's Big Five of Literacy and the What Works Clearinghouse.

There was also evidence that the demands of implementing MTSS pushed these principal's literacy leadership (NAESP, 2002) by engaging them much more in key practices and supports, for example, more carefully aligning curriculum, instruction and assessment, providing more reliable time and space for teacher collaboration, and engaging in more direct conversation with teachers around literacy teaching and learning.

The most evident interaction between MTSS and LCK, was the influence it seemed to have on leader's understandings of how organizational conditions and systems influence the quality of literacy programs and practices. The clearest example was these principal's response to the demands of establishing a tiered system of support. All three described a multi-tiered support model rooted in a comprehensive literacy curriculum and strong core instruction. They expressed the

necessity of a literacy block of 90 minutes or more within the first tier. Prior to MTSS, there was, arguably, less conversation and conviction about not only instructional minutes, but about what the “core” of a literacy program was and what it required. They described Tier 2 support as additional time (often 30 minutes daily) to learn in small groups organized by needs identified in collected and analyzed assessment data. They enacted contemporary understanding that an effective Tier 2 supplement should be offered selectively to students who qualified for special education services (or attended a school with Title One funding,) and not enroll more than 10 to 15% of their students. Tier 3 was commonly explained as additional learning time with a specific intervention guided most often by a special education teacher. All shared the perspective that the tiers of support should align with teaching and learning in the classroom.

The three principals also spoke of supporting students as early as possible. In contrast to the former “wait-to-fail” model (MAASPE, 2007) implementing MTSS has instilled commitments to intervene early—early in the year, early in a child’s school career—when reading struggles were detected. Third, the views expressed reflected expectations and understandings of *literacy programs as coordinated systems* rather than piecemeal practices that naturally accumulate. All of these developments seemed to have spurred forms of knowledge that have expanded their LCK.

Multi-tiered systems are driven by data and place greater demands for effective data use and decision making upon leaders. Each principal spoke of multiple forms of data and the information offered in them. They now lead layers of routinized data collection for screening, diagnostic assessments and progress

monitoring and bring this data into planning and decision-making processes at the team and whole school level. In the old model of support for struggling readers, details on a student's progress were shared between just a few teachers. A literacy teacher would perhaps have a brief interaction with a classroom teacher as she dropped the child back off to the classroom after a lesson. A principal may have requested updates from a special education teacher quarterly or bi-annually. MTSS has pressed these principals to devise systems of sharing student data around literacy progress, thus building much more collective ownership of student academic growth.

Teams, established by each principal in their school, purposefully used data for decision-making in the problem solving process. In all cases, these teams are representative of multiple grade levels, positions, and expertise. This has resulted in leadership teams that complete preliminary data audits and create the forms and agendas previously mentioned. These teams, and individual members in them, facilitate the various platforms within the MTSS such as grade level meetings, Data Days, and Child Study Team meetings, all of which focusing on literacy assessment data.

In designing their systems, each principal confirmed that it had afforded them a welcomed structure to support student literacy achievement. By implementing the essential MTSS components, they felt they had created processes to organize teams around literacy data, to more rapidly and effectively address students literacy deficits and to consistently track student success in literacy. Refining their systems produced tools and routines such as succinct meeting agendas, progress tracking folders, and visuals to display students' present level of

performance. In each case, the principal asks interventionists, special education teachers, and classroom teachers alike to share data across the team.

Lastly, allocating resources to support an effective MTSS may also place new demands on leaders LCK. In this study, each principal used their LCK to not only direct resources more heavily into K-2 instruction to ensure early intervention but also assigned the most highly trained teachers as the interventionists to work with the most at-risk learners. Two of three principals placed former Reading Recovery teachers in these crucial roles. Special education teachers are also utilized more effectively as an outcome of training in more targeted and individualized instruction and interventions.

Although the principals in this study similarly placed highly trained teachers in interventionist positions, Mrs. Bender also acted to place the strongest literacy teachers in early elementary classroom where quality instruction is crucial. Mr. Kuch and Ms. Johnson acknowledged the need for this but had not made these changes. However, Mr. Kuch shared that in hiring, he has looked for teachers with evidence of deep literacy knowledge and has significantly strengthened his first grade and second grade teams as a result.

A significant observation that can be drawn from the above is that demands for the design and implementation of MTSS have had a leveling if not an equalizing effect on how leader's LCK influences the quality of their literacy programs and practices. For example, it appeared evident, based on his repeated references to routines and structures, that Mr. Kuch relied heavily on the fairly directive systems of MTSS to develop his program and his LCK. He reference to model and program components and 'best practices' left him feeling less vulnerable and able to situate

himself within a set of advocated and compelled structures rather than extensive personal knowledge of literacy practice. On the other hand, when Mrs. Bender and Ms. Johnson were discussing their appreciation of the systems that came with MTSS, they did not comment on structures and protocols nearly as often as Mr. Kuch. Instead, they tended to speak more often to their understandings of quality instruction based on a continuum of skills learned by students and the opportunities to share this knowledge. With defined data systems and established methods to analyze literacy data, for example, a principal can be responsive and improve the quality of literacy teaching and learning.

Like many policies that seek to impose minimum standards of practice and encourage capacity building, MTSS may have both prevented weak literacy practices at the school, such as using an intervention that does not target student needs. MTSS can also encourage a far stronger system of overall assessment and data collection. For example, by introducing data use routines, higher levels of shared knowledge between and amongst leaders and teachers are developed.

Additional Observations and Themes

Looking across cases, additional observations and reflections emerged. The first concerned differences in how leaders thought about what they wanted their teachers to know and therefore how they thought about professional development opportunities. The second considered differences in the growth of collaborative cultures and problem solving. A third reflection considered the influence of MTSS and LCK interactions on leadership content knowledge and instructional leadership overall.

Professional Development

The depth and breadth of principal's LCK may influence what they want their teachers to know, (in this case what forms of literacy knowledge and skill they seemed most concerned with) and how they interact with teachers' professional learning and development. As experienced literacy coaches with extensive specialized training, Mrs. Bender and Ms. Johnson often referenced specific literacy researchers and authors (for example, Richard Allington and Tom Rasinski) and leading local practitioners to whom they attributed their LCK. They often shared specific references and resources with staff to direct and further their professional and pedagogical knowledge.

Ms. Johnson and Mrs. Bender also made frequent references to professional development needs and opportunities. For example, they referred to several opportunities to extend teacher s' professional knowledge in facilitating small group reading lessons, writing instruction, formative assessments and in-class interventions. Additionally, they often created and lead professional learning sessions for their own teachers based on their experiences and training. Mrs. Johnson explained: *"I was a literacy teacher and had training in Project Read, Orton-Gillingham, and Reading Recovery. Everything made sense to me."* Ms. Johnson was trained in *Reading First* and *Language Essentials for Teachers of Reading and Spelling* from her time as a district literacy coach. *"I went through it. I learned about speech. I learned about articulation. I became so knowledgeable because I had to teach it."* They had recently provided professional development to their teachers in specific literacy interventions: *Read 180*, *Reading Apprenticeship*, and the *Michigan Association of Intermediate School Administrators Writing Curriculum*. Their

experiences and identities as literacy specialists and instructors fostered in them stronger orientations and ideas about what there is to know about literacy practice and how their teachers could learn and develop their knowledge and skills.

In contrast, Mr. Kuch did not describe any specific professional development or trainings in which he or his staff was engaged. His primary model for professional development was local, peer-to-peer learning where a team of teachers observed one another's instruction and held a debriefing session where warm and cool feedback was given. He assumed and trusted that teachers would model reasonably effective literacy teaching and provide useful feedback to each other. He seemed to not place demands on the content or standards of their interactions or knew if and how the learning from one another was advancing their practice specifically.

In 2011, a three-part study by the Stanford Center for Opportunity Policy in Education and the National Staff Development Council provided descriptive information on professional-development trends in the United States. Among other findings, the report states that outside traditional professional development, like those offered by Mrs. Bender and Ms. Johnson, is on the decline:

The intensity of other types of professional development decreased between 2004 and 2008. Training of at least nine to 16 hours on the use of computers for instruction, **reading instruction**, and student discipline all declined notably, while training of up to eight hours in those areas increased. Training in content, however, increased during that time period (Viadero, 2004).

The quote might be an indicator of a shift in where and how professional development occurs, from out-of-school workshops, classes, trainings, or conferences to more embedded in-house learning and development. Several popular models for site-based or in-house staff development matured during the

2000s, including learning teams, professional learning communities and the like. In this model, much like the one instituted by Mr. Kuch, teachers in either grade-level or content-area teams meet to collaborate on teaching strategies and solve problems. In some examples, teachers set common instructional goals, teach lessons in their individual classrooms, administer formative assessments or gather student evidence of learning to determine levels of student mastery, and then regroup as a team to analyze the data together. Then, they pinpoint areas of success, identify areas for improvement, and set goals for future teaching (Honawar, 2008). They analyze the lesson's strengths and weaknesses and determine how to strengthen the lesson (Viadero, 2004).

Although we lack hard data on which professional development models lead to better teaching, professional development tends to rely on a two-part transfer of knowledge: Inculcating in teachers new knowledge and skills to change their behavior, and then application of those knowledge and skills in ways that subsequently result in improved student mastery of subject matter. Reading and PD experts have raised a concern that less than 24 hours of professional development across a year in reading instruction is not intensive enough to be effective, and that it does not focus enough on subject-matter knowledge (Cohen and Hill 2001; Foorman and Moats 2004; Garet, et al., 2001). In a federally-funded study, researchers concluded that two professional-development approaches based on a popular early-reading program increased teachers' knowledge of literacy development and in their use of explicit reading instruction (Garet, et al, 2008). They provided an eight-day series of content-based in-service institutes and seminars focusing on second grade reading instruction, based on Language

Essentials for Teachers of Reading and Spelling (LETRS; treatment A) plus intensive in-school coaching with coach training provided by the Consortium on Reading Excellence (CORE; treatment B). This type of professional development is similar to the opportunities fostered by Mrs. Bender and Ms. Johnson where teachers received specific training in literacy instruction, often lead by experts in the field over an extended period of time, followed by coaching in the classroom and school setting.

Collaborative Cultures

Principals play an important role in literacy development when they support and coordinate collaborative time for teachers (Zemelman et al., 1998). Similarly, shared decision-making within teams is a hallmark of effective MTSS (Hall, 2008). In all cases here, there were strong connections between these principal's LCK and MTSS developments and the formation of more reliably embedded and structured collaboration processes. There was a clear movement from groups of teachers and staff members, a movement lead by each principal, to gather and collaborate to create more universal and reliable processes such as child and student study team meetings, leadership team meetings, data dialogues and grade level team. These became routinized spaces for teachers to gather in a collective effort to improve teaching and learning for all students. These collaborative teams worked with data to identify and jointly solve problems but they also exchanged instructional strategies. Research suggests that these conditions help to build a larger range of shared practices across teachers as well as a sense of collective ownership for student achievement (Fuchs, et al., 2003). As the study progressed, it became challenging to differentiate what developed as a consequence of LCK and what emerged in the schools as an outcome of MTSS. Likely both have afforded the

principals the skills and opportunities to help teams focus their work around literacy data, teaching, and learning.

Instructional Leadership

There is great potential for LCK and MTSS to interact in ways that promote and develop the practices of instructional leadership. Instructional leadership calls on principals to play a more active supportive, even directive, role in the instructional core of their school. Hallinger & Heck (1996) described instructional leadership in terms of behaviors such as making suggestions, modeling effective instruction, giving feedback, supporting collaboration, and providing opportunities for professional development.

Some observations on collaboration and professional development have been made above. How the three principals modeled literacy instruction also varied. Mrs. Bender and Ms. Johnson specifically talked about coaching and modeling effective literacy strategies for their teachers, drawing on their background knowledge and coaching training from their former districts. Mrs. Bender said, “I model the use of assessments, collecting data, learning from the data, and transferring it to meaningful intervention.” Likewise, Ms. Johnson stated, “I enjoy coaching and modeling in the area of literacy. Teaching it and facilitating.” Mr. Kuch, on the other hand, did not indicate that he engaged in modeling literacy instruction.

Paralleling modeling, feedback and evaluation of literacy teaching is a notable form of instructional leadership. In evaluating teachers, Mrs. Bender and Ms. Johnson, offered specific feedback on the literacy instruction they observed. Mr. Kuch, admittedly, does not feel as confident; his discussion with a teacher after a

classroom visit focused on data to reflect effective teaching. “I’m going to base it on data and not observation,” he shared. This is not to say that Mr. Kuch cannot be an instructional leader, but that it would have a different profile and perhaps lead to different conversations and expectations.

Others have noted that instructional leaders are more effective when they know something of how instruction and learning differ across subject areas and an understanding of student growth (Stein & D’Amico, 1999; Stein & Nelson, 2002).. Each principal demonstrated knowledge of how effective literacy instruction, curriculum and assessment was distinct from all other subjects. Also, in describing their knowledge of MTSS, they were able to discuss student growth expectations along a continuum of literacy skills and specific and targeted interventions and supports for those not making progress.

M.K. Stein’s Post-holing and Distributed Leadership

In their work on leadership content knowledge, Stein and Nelson (2003) proposed that instructional leaders have a strong foundation in at least one content area. This included strong facilities with how a subject is taught, the way it is learned, and what is required to provide organizational structures for adults and students around that content. Their premise was that generalized knowledge alone does not lead to the ability to recognize strong instruction but that having deep knowledge in one subject could and would develop leadership content knowledge overall. They suggested that principals practice “post-holing” to develop knowledge in other subject areas. This entails delving into a slice of content knowledge to gain some understanding of teaching and learning in that subject. The combination of knowing one subject intimately and knowing a select element of other subjects

deeply, allows leaders to interact with the quality of instruction in their schools overall.

Here, a question that emerged is whether the processes of MTSS offered a type of post-holing. When conversations turned to mathematics (the only other subject mentioned in study data), these principal's participation in discussions notably dropped off. When asked about this drop off, each shared that their MTSS had developed to ensure literacy achievement but was no less useable or necessary for improving math achievement. Indeed, all initiated that this was the logical next step in their school improvement planning. So, although they did not express deep understanding of mathematics teaching and learning, they were using what they had learned about effective literacy instruction and supports to rethink the quality of their math programs. They were post-holing from knowledge of how a richer system of targeted instructional strategies and interventions contributed to more children achieving expected learning standards.

In her research, Mary Kay Stein, also referenced that school administrators, in an effort to construct their leadership around a content area, can practice distributed leadership:

Where administrators' knowledge is thin, the development of working groups, networks, or teams that are deliberately comprised in such a way that the requisite knowledge is held by others in the group would be an alternate way to ensure that the necessary expertise was available for decision-making (Stein & D'Amico, 1999).

Here too, the influence of developing MTSS on leadership practice arises. For example, Mr. Kuch, with much more modest levels of LCK, had a system of collaborative teams in place that facilitated the types of distributed leadership Stein

advocates here. In all of the schools, there was evidence that a more extensive and developed system of teams provided distributed leadership opportunities.

CHAPTER 5

CONCLUSIONS

This study was motivated by a mix of personal experiences and exposure to research about leadership content knowledge. Personally, I was bothered and perplexed by hiring practices that seemed to favor secondary school teachers over elementary teachers in selecting elementary school principals. Academically, I was intrigued by Mary Kay Stein's research on leadership content knowledge. Stein (2002) proposed that leadership content knowledge was a missing paradigm in the analysis of school leadership. I saw her work as a way of bringing disciplined study to my observations and interests.

This study developed a working definition of Leadership Content Knowledge in Literacy and then traced principal literacy content knowledge through three cases. In each, leaders were developing literacy instruction as they developed newly mandated multi-tiered systems of support. My purpose was to examine the relationships between LCK, MTSS, and a school's literacy instruction and programming. I proposed that literacy content knowledge and the designing of MTSS might influence each other within a principal's role as instructional leader.

LCK and Literacy Programs

Data from the study supported propositions that strong sources of literacy content knowledge could have distinct and positive impacts on how principals developed literacy programs, the types of support structures they developed, and some of the expectations for practice they placed on teachers in their schools.

Numerous times in the study the principals applied their knowledge of literacy to drive implementation of core literacy programs complimented by comprehensive interventions. They were able to identify literacy experts in their schools to take on interventionist roles to support struggling readers. Literacy content knowledge was also used when holding teachers accountable for the use of specific instructional routines and strategies in the classrooms.

LCK and MTSS

The study also explored relationships,,within a principal's instructional leadership, between Literacy Content Knowledge and the design and implementation of Multi-Tiered Systems of Support. Specifically, the study found that these principals recognized and acted on the absolutely fundamental importance of strong literacy instruction guided by a research-based core methodology and curriculum as well as interventions. They were intentional in expecting and providing, space and time for school teams to problem solve around useful data collected within a system. The implication stands. Regardless of background, elementary principals now seem to identify their role with strong provision and leadership of literacy programs and support.

LCK and MTSS

It also emerged that the process of developing MTSS could have a strong positive influence on principal's leadership content knowledge. While building necessary systems involving effective core instruction and intervention, data collection and analyses, a principal can hone a deeper knowledge of literacy.

According to the findings, instructional leadership, overall, can be positively influenced by developing MTSS. Establishing regular contexts in which to discuss

student data tied to teaching, learning, and intervention situated each principal for effective literacy leadership.

For example, the study found that the interactions between principals' LCK and MTSS influence the quality of professional development offered to staff and raises the level of team collaboration. Within MTSS, an essential component is conversation around regularly collected data. Each of the principals in this study established and facilitated on-going professional dialogue around assessment, evidence of student growth, and decision made to instruction and intervention. In addition, the principal who had the deepest LCK, provided the most in-depth training and professional development focused purposefully on literacy.

LCK and Instructional Leadership

Research on leadership has developed stronger understandings on the intense range of influential decisions leaders make. In her work, Printy pointed out some of the many organizing decisions principals may make that influence teaching and learning in schools: the organization of instructional time, the methods of student grouping, student-teacher ratios, the use of para-professionals, collaborative meeting opportunities, and many others, not to mention teacher hiring (Printy, et al., 2008). This study has shared many observations on the interactions between these decisions and principal's content knowledge. For example, each principal practiced and supported small group intervention where an interventionist may work with 1 to 5 students at a time. They also encouraged teachers to group students according to needs based on data, not out of convenience and randomness.

Influence of District Context on the Exercise and Development of LCK

A growing reality in our schools exists where mandates, often driven by external forces, have both positive and negative influences on our not only our systems but the professional growth of educators. Accountability and even policy can result in necessary changes that drive even the learning of the adults in schools. For example, Mr. Kuch's district adopted a statewide initiative to implement MTSS resulting in his need to learn more about literacy instruction and assessments with the structures he was building. At the same time, the high demands of the instructional leader's role can mask weak knowledge in content areas and interfere with decisions such as hiring, observations, and evaluations.

Two of the studied principals exercised considerable local, discretionary control over these decisions. The third, Ms. Johnson, worked in a large district with more centralized decision-making. It is notable then, that, even with a rich background of literacy content knowledge, progress towards a more highly developed literacy centered MTSS seemed slower and more troubled in her school. This reminds us that many contextual conditions can influence the exercise of leadership content knowledge. Access to resources including time, training, funding, and quality staff may significantly mediate relationships between content knowledge and the organization of instruction and the quality of teaching and learning.

A central question embedded in the study was whether elementary principals with weak literacy content knowledge could effectively develop and improve literacy programs and outcomes. We know from the work of Mary Kay Stein (2003) that strong knowledge of instruction and subject matter influence how

they observe classroom practice, understanding effective instruction when they see it and setting conditions for continuous academic learning. I would say, although my sample size was small, there was some evidence of this. We know that the principal entering the position with the, admittedly, limited early literacy knowledge, really looked more at structural factors in a classroom such as groupings of students rather than specific skills being taught. He allowed those with literacy expertise to model and observe for teaching of effective strategies and intervention.

In using MTSS development as a context for the study, the role that externally developed programmatic structures might play in leveling some of the effects of leader's content knowledge emerged. Designing and implementing MTSS provided a platform to use and grow literacy content knowledge and to develop instructional leadership overall. In particular, the emphasis on collaborative literacy intervention and problem solving processes encouraged by MTSS (and school improvement research more generally) fostered many more occasions for distributed leadership that might draw upon literacy expertise in the school as a whole. Thus, one possible implication here is that if and when districts hire elementary principal's with weak literacy content knowledge, they do so on the condition that first, strong sources of knowledge exist in the school's staffing arrangements and second, that strong structural supports for collaborative work and distributed leadership are well established in the school or are targeted as a priority development.

LCK and Distributed Leadership

Where exactly literacy content knowledge might fit in the list of leadership capabilities and school needs is not easily established. *"A distributed leadership*

perspective moves beyond the Superman and Wonder Woman view on school leadership" (Printy, 2008). It may be that this way of thinking about leadership can go a long way to address some of the risks of weak principal content knowledge. For example, each principal identified strong leaders of literacy within their schools. These individuals were vocal during times of collaboration, spoke eloquently about the systems with the building, and reportedly played a significant role in the continuous develop of the principals themselves. It also still seemed that the two elementary principals with strong literacy background were able to interact with their teachers around literacy practice and expectations in a very distinct and value added manner.

As a final observation, the principal with the weakest literacy background was purposeful about acknowledging a lack of background in this area and was quick to rely on the expertise of others in his learning community. Distributed leadership in such a case would be essential to ensure tight systems that support literacy growth of students.

Implications for Research and Practice

Research

The work on leadership content knowledge by Mary Kay Stein is the dominant resource in this area of research. Depth of principal content knowledge and its potential correlation with student achievement would be influential on our study of instructional leadership. It may be that important next steps in our knowledge development be to understand more about when and how distributed

leadership of literacy instruction develops and how formal leaders at both the school and district level can act to reliably monitor, assess and support it.

This study obviously focused on elementary principals and early literacy content knowledge. It may bring about questions concerning secondary principals' content knowledge interacting with MTSS within the instructional leadership role. Of course, MTSS at the secondary level require different structures and strategies.

Practice

Findings from this study enrich a narrative that helps us better understand a principal's role in developing the quality of instructional programs, on the conditions of teaching and learning, and on students learning outcomes. One direct way to impact this is through quality professional training and development. Principals can, in many contexts, play a significant part in the content of such teacher learning.

We should continue to look at training for school leaders, both elementary and secondary, in specific content areas to ensure that, as instructional leaders, we continue to promote best practice in instruction and strong pedagogy. This study suggests that teachers' professional learning can be influenced by the building leader. This could have implications on what professional development is encouraged and offered. Lastly, as we find ourselves entering an era of teacher and administrator evaluation tied to student growth, we consider how student achievement can be related to a principal's content knowledge.

APPENDICES

Appendix A: Teacher Leader Protocol

Relationships Between Leader's Literacy Content Knowledge and Multi-Tiered Systems of Support

Teacher or Literacy Coordinator Interview

Pre-Interview Commentary: Thank you for agreeing to speak with me. I am hoping that you can help clarify some questions I have after studying your School Improvement Plans and other documents that explain how your MTSS program works. I am trying to understand how the program has developed and how it is structured.

As I indicated in early correspondences, with your consent, I would like to record this conversation so that I accurately capture your clarifications and comments . As a reminder, you are free to refuse to answer any question and may end the conversation at any time. Do I have your permission to audiotape this interview?

Thank you. Do you have any questions before we begin?

1. Can you begin by telling me about your assignments in the school and how you are involved in literacy programming, MTSS and school improvement planning?
2. After studying a range of documents, I have some clarifying questions about when the school began implementing MTSS and how it has developed.
3. In the documents I studied, I noticed _____. Can you clarify for me_____?

(Questions specific to document analysis to follow)

If time permits...I am interested in your perspective on any of the following questions as well.

4. Can you describe this school's MTSS model and how it works to support literacy?

Potential follow-up questions:

How and why in that particular way have you....

- 4a. intervene early in the area of literacy?

- 4b. used a problem-solving model to make decisions about literacy within a multi-tier model?
 - 4c. used scientific, research-based validated instruction and intervention in literacy?
 - 4d. monitored student progress in literacy to inform instruction?
 - 4e. used data to make decisions about literacy?
 - 4f. built a culture where your staff believes they can effectively teach all children in the area of literacy?
 - 4g. used literacy assessments for screening, diagnostic, and progress monitoring?
5. Are there others systems or structures to your building's MTSS that we did not discuss but you have worked to implement?
6. Could you describe the effects of MTSS on student growth?
7. Are there any other observations and insights on the MTSS program that would be helpful for me to hear and understand?

Post-Interview Commentary: This concludes the questions I have for you all. Thank you for participating.

Appendix B: Principal Observation Debrief Protocol

Relationships Between Leader's Literacy Content Knowledge and Multi-Tiered Systems of Support

Observation Debrief with Principal

Pre-Debrief Commentary: Thank you, _____, for agreeing to discuss the observation of _____ that I just made. As I indicated in early correspondences, with your consent, I will record this interview so that I can better recall your comments later. As a reminder, you are free to refuse to answer any question that makes you uncomfortable and you can stop the interview at any time. Do I have your permission to audiotape this interview?

Thank you. The purpose of this debrief is to clarify the observations I made. If you have no questions, we will begin.

1. Tell me about this meeting I observed. Was it typical? Why or why not?
2. What preliminary work was done to prepare for this? By whom?
3. Were you using an established agenda? How did that evolve?
4. I noticed _____. Can you tell me more?
5. This person did _____. Why is that?
6. I heard _____. Can you explain what was being discussed?
7. How did your team come to make _____ decision?
8. I noticed you did (administrative behavior). Why did you take on that role?
9. As the principal, how would you describe the environment you created to support the work that occurred during this meeting?

10. Is there anything that I have not asked about that you think would help me understand how this meeting supports your school's MTSS?
11. Can you explain your experience with MiBLSi

Appendix C: Principal Interview Protocol

Relationships Between Leader's Literacy Content Knowledge and Multi-Tiered Systems of Support

Structured Principal Interview

Pre-Interview Commentary: Thank you, _____, for agreeing to be interviewed for my study. As I indicated in early correspondences, with your consent, I will record this interview so that I can better recall your comments later. As a reminder, you are free to refuse to answer any question that makes you uncomfortable and you can stop the interview at any time. Do I have your permission to audiotape this interview?

Thank you. This interview is designed in four parts: Your professional background; Your knowledge and experiences with Multi-Tiered Systems of Support, or Response to Intervention; Your training and background in literacy learning and instruction, and Your thoughts on how the two influence each other. Do you have any questions before we begin?

Part 1: MTSS Knowledge and Evidence of Systems and Structures Built in School to Support Literacy

1. Can you recall when you first encountered the concept or MTSS and what your thoughts about it were?

Possible probes:

1a. What was appealing?

2b. What was unclear or worrisome?

2. Can you describe how your school uses a multi-tiered model of service delivery to support literacy?

3. In the documents that I have studied, I noticed (this is how you do things). Can you tell me why?

4. Can you describe this school's MTSS model and how it works to support literacy?

Potential follow-up questions:

How and why in that particular way, have you...

4a. intervened early in the area of literacy?

- 4b. used a problem-solving model to make decisions about literacy within a multi-tier model?
 - 4c. used scientific, research-based validated instruction and intervention in literacy?
 - 4d. monitored student progress in literacy to inform instruction?
 - 4e. used data to make decisions about literacy?
 - 4f. built a culture where your staff believes they can effectively teach all children in the area of literacy?
 - 4g. used literacy assessments for screening, diagnostic, and progress monitoring?
5. Are there others systems or structures of your building's MTSS that we did not discuss but you have worked to implement?

Part 2: Literacy Content

6. Can you describe for me how you think about literacy instruction across grade levels?

Potential follow-up questions:

- 6a. What curriculum is used to teach literacy? What are the strengths and weaknesses? How did you come to the decision to implement that curriculum?
- 6b. If you were observing a primary grades (or K, 1, 2) literacy lesson this year, what would you look to see happening? What criteria might you use to judge the quality of the lesson?
- 6c. What types of literacy activities would you expect kindergarten, first, and second grade students to be engaged in when visiting a classroom?
- 6d. What types of instruction in literacy would you expect to see a teacher using in a third, fourth, and fifth grade classroom?
- 6e. What types of literacy activities would you expect third, fourth, and fifth grade students to be engaged in when visiting a classroom?
- 6f. When you create your teacher assignments, how do you consider their skills of teaching reading?

- 6g. Think of your strongest teacher of literacy. What do you see that makes them the strongest?
- 6h. Think of your weakest teacher of literacy. What do you see that hinders her?
7. Think of one of your most struggling to read students. Think of some effective interventions you would expect to be implemented. How did you come to select these interventions?
8. What would be the strength and weaknesses of the process your school would go through to help a struggling reader?

Part 3: This last set of questions will inquire about your background in literacy. By literacy, I am including the teaching, or instruction, assessment and the learning of reading, writing, speaking, and listening.

9. Tell me about your literacy content knowledge. Please include any experiences that have influenced or contributed to your knowledge and overall sense of confidence in leading high quality literacy teaching and learning,

Potential follow-up questions based on resume and previous self report:

- 9a. On a scale of 1-10, 1 being low and 10 being high, where might you mark your literacy content knowledge?
- 9b. What college/university courses did you take that focused on literacy?
- 9c. Have you attended any conferences or trainings that focused on literacy? If so, what were the titles? On what was the content focused?
- 9d. Can you name any resources, books or otherwise, that you consult when you have an inquiry about literacy?
- 9e. Have you been a part of any book/study groups that focused on literacy? If so, describe the focus of the group.
- 9f. How have you learned about literacy from peers or mentors?
- 9g. Overall, what learning experience, if any, has been most useful and important to your literacy content knowledge?

10. Is there anything you would like to add about your background or knowledge about literacy teaching or learning?

Part 4: Links between MTSS and LCK in Literacy

11. Thinking about the challenges with implementing MTSS as a principal, what are you glad you know and what do you wish you knew more about?

12. How do you think your knowledge of literacy supported or hindered your MTSS work?

13. Which do you think has had the bigger influence on the other, MTSS or literacy content knowledge?

14. You can likely hear that I have been trying to connect the relationship between principal content knowledge in literacy and MTSS. Do you have any reflections or thoughts on how these might impact one another?

Part 4: Principals' Background, Training in Education and Experiences

I would like to take just a few minutes to ask about your training.

15. What did you do before becoming an elementary principal?

16. Why did you desire to be an elementary principal?

17. In addition to your degree(s), have certain formal programs, training, and /or research had a significant influence on your leadership?

18. What informal leadership roles have you held in the past at this school?

Post-Interview Commentary: This concludes the questions I have for you. Thank you for participating. I will contact you in the next four weeks if I need clarification of any of the responses you shared today. Thank you, again.

Appendix D: Observation Recording Sheet

DATE: _____

SCHOOL/MEETING TYPE: _____

PARTICIPANTS:

INITIALS/DESCRIPTOR	ASSIGNMENT/ROLE

ROOM / SEATING MAP

In the columns between the time log and the scripting box, identify certain incidents or behaviors that you might want to tick/count. If they occurred in the time minute slot, you would just tick the cell. Since the purpose here is to get a sense of the principal in action, target a few key instructional leadership behaviors (A-D) and document evidence of literacy content knowledge. This serves as a working document to inform later data collection.

Time	A	B	C	D	Activity Description/Narrative
5 min					
10 min					
15 min					

Appendix E: Participant Invitation

Dear Principal:

I am a graduate student at Michigan State University. I am currently studying the relationship between literacy content knowledge and Multi-Tiered Systems of Support (MTSS) within elementary principals' instructional leadership. I am also interested in gaining a better understanding of training and education that elementary principals receive that might influence this relationship.

In order to learn more about elementary principals' literacy content knowledge and MTSS, I plan to collect a series of data. Your commitment would begin with one observation of an MTSS process within your school (i.e. data meeting, problem solving team meeting, grade level meeting) followed by an hour debriefing session. This would take place during the week of April 21 or April 28. During the debriefing, I would collect artifacts that document and archive your school's MTSS processes and return for a one hour interview during the week of May 26.

If you are able to participate, please contact me by March 21, 2014, via e-mail: musiak@hpsk12.net or by telephone: 517-525-3369. If I have not received your response at that point, I will contact you by e-mail or by telephone the week of March 24.

I greatly appreciate your time and consideration and I look forward to hearing from you. Please feel free to contact me with inquiries prior to making a decision concerning participation. Thank you.

Sincerely,

Melissa Usiak

Appendix F: Principal Consent Form

Relationships Between Leader's Literacy Content Knowledge and Multi-Tiered Systems of Support

Principal Consent Form

I am a graduate student at Michigan State University. I am currently studying the relationship between literacy content knowledge and Multi-Tiered Systems of Support (MTSS) within elementary principals' instructional leadership. I am also interested in gaining a better understanding of training and education that elementary principals receive that might influence this relationship. In order to learn more about elementary principals' literacy content knowledge and MTSS, I plan to collect a series of data. The purpose of this form is to request and ask for your consent to participate in this study. Your commitment is one observation of an MTSS process within your school (i.e. data meeting, problem solving team meeting, grade level meeting) followed by an hour debriefing session. During the debriefing, I will collect artifacts that document and archive your school's MTSS processes and return for a one hour interview at a later date. I ask your permission to audiotape the debriefing and interview sessions.

Your participation in this study is completely voluntary. You can choose not to participate at all, or you can refuse to answer certain questions. Your privacy in this study will be protected to the maximum extent allowable by law. There are no known risks to your participation. I will be changing the name of the principals and schools in the analysis and any publication as a result of this study.

The study will benefit principals in elementary school settings. Given the strong accountability policies under which schools operate, it is imperative that all educators better understand how principals can become more effective instructional leaders. I am happy to share the results of this study with you.

Participation consent:

I voluntarily agree to participate in this study.

Signature of Principal

Date

Audiotaping consent:

I voluntarily agree to be audiotaped during the debriefing and interview.

Signature

Date

If you have any questions regarding this study, please contact Melissa Usiak by email: musiak@hpsk12.net. If you have any questions or concerns regarding your role and rights as a research participant, or would like to register a complaint about this study, you may contact the Primary Investigator, Dr. BetsAnn Smith at email bas@msu.edu, or regular mail: 412 Erickson Hall, East Lansing, MI 48854.

Appendix G: Teacher Consent Form

Relationships Between Leader's Literacy Content Knowledge and Multi-Tiered Systems of Support

Teacher Leader Consent Form

I am a graduate student at Michigan State University. I am currently studying the relationship between literacy content knowledge and Multi-Tiered Systems of Support (MTSS) within elementary principals' instructional leadership. I am also interested in gaining a better understanding of training and education that elementary principals receive that might influence this relationship. In order to learn more about elementary principals' literacy content knowledge and MTSS, I plan to collect a series of data. The purpose of this form is to request and ask for your consent to participate in this study. Your commitment is one thirty-minute interview to clarify your school's MTSS. I ask your permission to audiotape interview sessions.

Your participation in this study is completely voluntary. You can choose not to participate at all, or you can refuse to answer certain questions. Your privacy in this study will be protected to the maximum extent allowable by law. There are no known risks to your participation. I will be changing the name of the principals, teachers, and schools in the analysis and any publication as a result of this study.

The study will benefit principals in elementary school settings. Given the strong accountability policies under which schools operate, it is imperative that all educators better understand how principals can become more effective instructional leaders. I am happy to share the results of this study with you.

Participation consent:

I voluntarily agree to participate in this study.

Signature of Teacher

Date

Audiotaping consent:

I voluntarily agree to be audiotaped during the debriefing and interview.

Signature

Date

If you have any questions regarding this study, please contact Melissa Usiak by email: musiak@hpsk12.net. If you have any questions or concerns regarding your role and rights as a research participant, or would like to register a complaint about this study, you may contact the Primary Investigator, Dr. BetsAnn Smith at email bas@msu.edu, or regular mail: 412 Erickson Hall, East Lansing, MI 48854.

Appendix H: Matrix
Influences of MTSS on Instructional Leadership and Literacy LCK

MTSS COMPONENTS	Indicators of Instructional Leadership	Indicators of Literacy LCK
1. Intervene Early	Model effective instruction 5	Possess subject matter knowledge (literacy) - How it is taught/instruction 2, 5
2. Multi-Tier model of service delivery	Give feedback/evaluation	Possess subject matter knowledge (literacy) - How it is learned 3
3. All children can be taught effectively	Support collaboration 4	Promoting and supporting effective literacy practices 5
4. Use problem solving model	Provide PD opportunities/adult learning	How principals build systems/cultures that support literacy 2, 9
5. Research based instruction/interventions	Knowledgeable/supportive of instructional methods/curriculum/assessment 5, 8	Curriculum work 5
6. Monitor student progress	Design/implement instructional methods/curriculum/assessment 2, 5, 8	Options for organizing time/space in flexible ways 2, 9
7. Use data to make decisions	Knowledgeable/understanding of student growth/development 6, 7, 8	Align assessments and learning standards 7,8
8. Use assessments for screening, diagnostics, progress monitoring	Knowledgeable of applied learning methods 2, 3	Establish interventions 5
9. Efficient allocation of resources		Invest in research 5

REFERENCES

REFERENCES

- Baumann, J. F. & Bason, J. J. (2004). Survey research. In *Literacy Research Methodologies* (pp. 287-307). Duke and Mallette (Eds.), New York: The Guilford Press.
- Batsche, G. M., Elliott, J., Graden, J., Grimes, J., Kovaleski, J. F., Prasse, D. (2005). *Response to intervention: Policy considerations and implementation*. Alexandria, VA: National Association of State Directors of Special Education.
- Batsche, G., & Education, National Association of State Directors of Special. (2006). *Response to intervention: policy considerations and implementation*: National Association of State Directors of Special Education.
- Baxter, P. & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13 (4), 544-559.
- Becker, H. S. (1991). Generalizing from case studies. In E. Eisner & A. Pershkin (Eds.), *Qualitative inquiry in education: The continuing debate* (pp. 233-242). NewYork: Teachers college Press.
- Blackburn, R. (2000). Breaking down the barriers: Using focus groups to research small and medium-sized enterprises. *International Small Business Journal*, 19(1), 44-63.
- Blase, J., & Blase, J. (2000). Effective instructional leadership: Teachers' perspectives on how principals promote teaching and learning in schools. *Journal of Educational Administration*, 38 (2), 130-141.
- A Blueprint for Improving Literacy Leadership: The Principal's Role in Improving Literacy Instruction* (2001). Children's Literacy Initiative. Retrieved on July 7 2005 from http://www.cliontheweb.org/principals_blueprint.html
- Booth, D., & Roswell, J. (2002). *The literacy principal: Leading, supporting and assessing reading and writing initiatives*. Portland, ME: Pembroke Publishers.
- Brookover, W. B., & Lezotte, L. (1982). *Creating effective schools*. Holmes Beach, FL: Learning Publication.
- Browning, L. (2003). U.S. income gap widening. *The New York Times*, September 25, 28.
- Bryman, A., (1988). *Quantity and quality in social research*. London: Unwin Hyman.
- Buffman, A., Mattos, M., & Weber, C. (2009). *Pyramid response to intervention*.

- Bloomington, IN: Solution Tree.
- Burch, P. and Spillane, J. P. (2003). Elementary school leadership strategies and subject matter: Reforming mathematics and literacy instruction. *The Elementary School Journal*, 103 (5), 519-535.
- Burns, M. K., & VanDerHeyden, A. M. (2006). Using response to intervention to assess learning disabilities: Introduction to the special series. *Assessment for Effective Intervention*, 32, 3-5.
- Burns, M. K., Jacob, S., & Wagner, A. (2008). Ethical and legal issues associated with using response-to-intervention to assess learning disabilities. *Journal of School Psychology*, 46, 263-279.
- <http://www.ciera.org>Center for Improvement of Early Reading Achievement. *Improving the Reading Comprehension of America's Children: 10 Research-based Principles*. Retrieved November 26, 2006, from <http://www.ciera.org/library/products/others/10principles-improveread/index.html>
- Center for Research on Education, Diversity and Excellence Standards, *Five Standards for Effective Pedagogy and Student Outcomes*. Retrieved November 26, 2006, from <http://crede.berkeley.edu/standards/standards.html>
- The Children's Literacy Initiative. Retrieved on March 4, 2007, from <http://www.ciera.org>
- Coburn, C. E. (2005). Shaping teacher sensemaking: School leaders and the enactment of reading policy. *Educational Policy* 19 (3), 476-509.
- Cohen, D. K., and Hill. H. C. (2001). *Learning policy: when state education reform works*. New Haven and London: Yale University.
- Denzin, N.K. (1989). *The research act: a theoretical introduction to sociological methods*: Prentice Hall.
- Department of Education. (2011). *Response to Intervention: A Multi-Tiered System of Support*. Retrieved August 25, 2008, from teachingforlearning.org/local/documents/rti-13.pdf Michigan. Department of Education. .
- DuFour, R. (2002). The learning-centered principal. *Educational Leadership* 59(8). 12-15.
- Education Evolving. *Response to Intervention: An Alternative to Traditional Eligibility Criteria for Students with Disabilities*. Retrieved on April 15, 2010, from http://www.educationevolving.org/pdf/Response_to_Intervention.pdf

- Editorial Projects in Education Research Center. (2011, June 29). Issues A-Z: Professional Development. *Education Week*. Retrieved Month Day, Year from <http://www.edweek.org/ew/issues/professional-development/>
- Elmore, R. (2000). *Building a New Structure for School Leadership*. Washington D.C.: Albert Shanker Institute.
- Elementary and secondary education act (ESEA). (2005). In S. Mathison (Ed.), *Encyclopedia of evaluation*. (pp. 124-125). Thousand Oaks, CA: SAGE Publications, Inc. doi: <http://dx.doi.org/10.4135/9781412950558.n161>
- Elmore, R. F. (2000). *Building a new structure for school leadership*. Washington, D.C.: Albert Shanker Institute.
- Foorman, B. R., and Moats, L. C. (2004). Conditions for sustaining research-based practices in early reading instruction. *Remedial and Special Education*, 25, 51-60.
- Fordham Foundation Progressive Policy Institute: *Rethinking Special Education for a New Century*.
- Fuchs, D., Mock, D., Morgan, P., Young, C. (2003). Responsiveness-to-intervention: Definitions, evidence, and implications for the learning disabilities construct. *Learning Disabilities Research & Practice*, 18, 157-171.
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., Yoon, K.S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38 (4), 915-945.
- Gibbs, A. (1997). Focus groups. *Social Research Update* from <http://sru.soc.surrey.ac.uk/SRU19.htm>
- Guth, N. D., & Pettengill, S. S. (2005). *Leading a Successful Reading Program*. International Reading Association.
- Hall, S. L. (2008). *Implementing response to intervention: A principal's guide*. Thousand Oaks, CA: Corwin Press.
- Hallinger, P. & Heck, R. H. (1996). Reassessing the principal's role in school effectiveness: A review of empirical research, 1980-1995. *Educational Administration Quarterly*, 31 (1), 5-44.
- Hallinger, P. (1992). School leadership development: Evaluating a decade of reform. *Education and Urban Society*, 24 (3), 300-316.
- Hammersley, M. & Atkinson, P. (1995). *Ethnography: Principles in practice*. New York, NY: Routledge.

- Hartley, J. (2004). Case study research. In Catherine Cassell & Gillian Symon (Eds.), *Essential guide to qualitative methods in organizational research* (pp.323-333). London: Sage.
- Heck, R. H. & Hallinger, P. (1999). Next generation methods for the study of leadership and school improvement. In J. Murphy & K. S. Loius (Eds.). *Handbook of Research on Educational Administration Second Edition* (pp. 141-162). San Fancisco: Jossey-Bass.
- Leithwood, K., Seashore Louis, K., Anderson, S. & Wahlstrom, K. (2004). *Review of research: How leadership influences student learning*. New York: The Wallace Foundation.
- Honawar, V. (2008, April). Working Smarter by Working Together, *Education Week*.
- Leithwood, K. A., & Reihl, C. (2003). *What we know about effective school leadership*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, April, 2003.
- Waters, T., & Cameron, G. (2007). *The balanced leadership framework: Connecting vision with action*. Denver, CO: Mid-continent Research for Education and Leadership.
- Interstate School Leaders Licensure Consortium's Standards for School Leaders. Council of Chief State School Officers. Retrieved on April 17, 2008, from http://wps.ablongman.com/ab_bacon_edadmin_1/0,6183,462533-,00.html
- Individuals With Disabilities Education Improvement Act, 20 U.S.C. § 1400 (2004).
- Jenson, E. (2013). *Teaching with poverty in mind: What Being Poor Does to Kids' Brains and What Schools Can Do About It*. Alexandria, VA: AS Lather, P.
- (1992). Critical frames in educational research: Feminist and post-structural perspectives. *Theory into Practice*, 31(2), 87-99.
- Lau, M. Y., Sieler, J. D., Muyskens, P., Canter, A., VanKeuren, B., & Marston, D. (2005). Perspectives on the use of the problem-solving model from the view- point of a school psychologist, administrator, and teacher from a large Midwest urban school district. *Psychology in the Schools*, 43, 117-127.
- Levine, D., & Lezotte, L. (1990). *Unusually effective schools: A review and analysis of research and practice*. Madison, WI: National Center for Effective Schools Research and Development.
- McBeth, M. E. (2008). *The distributed leadership toolbox: Essential practices for successful schools*. Thousand Oaks, CA: Corwin Press.
- Maxwell, Joseph A. (2005). *Qualitative research design: An interactive approach*.

- Thousand Oaks: Sage.
- Miles, M. B., & Huberman, A. M. (1984). *Qualitative data analysis: a sourcebook of new methods*: Sage Publications.
- Miller, B. F., & Crabtree, W. M. (1999). *Doing Qualitative Research* (Eds). Thousand Oaks, California: Sage Publications, Inc.
- McCarthy, M. M. (1999). The evolution of educational leadership preparation programs. In J. Murphy & K. S. Louis (Eds.), *Handbook of research on educational administration 2nd ed.*, pp. 119-139). Jossey-Bass.
- McGhee, M. (2007). Leadership and writing: How principals' knowledge, beliefs, and interventions affect writing instruction in elementary and secondary schools. *Educational Administration Quarterly*, 43 (3), 358-380.
- McNinch, G., & Richmond, M. (1981). Defining principals' roles in reading instruction. *Reading Improvement*, 18, 235-242.
- Manning, G., & Manning, M. (1984). What models of recreational reading make a difference? *Reading World* 23, 375-380.
- Maxwell, Joseph. (2005). *Qualitative Research Design* (2nd ed. Vol. 41). California: Sage Publication.
- Murphy, J. (2004). *Leadership for Literacy Research-Based Practice, PreK-3 Michigan*. Vanderbilt University, Nashville, Tennessee: Corwin.
- Murphy, J. (1999). *Reconnecting teaching and school administration: A call for a unified profession*. Paper presented at the annual meeting of the American Research Association, Montreal, Canada, April 1999.
- National Association of State Directors of Special Education (NASDS). (2006). *Response To Intervention Policy Considerations and Implementation*. Alexandria Virginia. Retrieved 8/5/2012
- National Association of Elementary School Principals (2001). *Leading Learning Communities: NAESP Standards for What Principals Should Know and Be Able to Do*. Retrieved on March 13, 2013 from <http://www.e-lead.org/principles/standards1.asp>
- National Institute of Child Health and Development (NICHD) 2000, *Report of the National Reading Panel: teaching children to read*, viewed 20 August 2011 <http://www.nichd.nih.gov/publications/nrp/smallbook.cfm>
- National Center on Response to Intervention (NCRI) (2012). RTI State Data Base

- Retrieved August 8, 2012, from <http://state.rti4success.org>
- National Research Council, *Preventing Reading Difficulties in Young Children*. Retrieved November 26, 1996, from <http://www.nap.edu/books/030906418X/html/>
- NCTM (2000). *Principles and Standards for School Mathematics*. Reston, VA: NCTM
- Nelson, B. S., & Sassi, A. (1998). *Administrators' conceptual change in support of school reform: The case of teacher supervision*. Paper presented at the annual meetings of the American Educational Research Association, San Diego, April 1998.
- Nelson, B. S., & Sassi, A. (2000). Shifting approaches to supervision: The case of math supervision. *Educational Administration Quarterly*, 36, 553-584.
- Nelson, B. S., & Sassi, A., & Driscoll, M. (1999). Developing a new eye for mathematics classrooms: Classroom observation and teacher supervision. *Journal of Mathematic Leadership*, 2 (4), 4-12.
- Nelson, B. S., & Sassi, A., & Grant, C. M. (2001, April). The role of educational leaders in instructional reform: Striking a balance between cognitive and organizational perspectives. Paper presented at the American Educational Research Association Conference, Seattle, WA.
- Nelson, B. S., & Sassi, A. (2005). *The Effective Principal: Instructional Leadership for High-quality Learning*. New York, NY: Teachers College Press.
- No Child Left Behind (NCLB) Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).
- Prestine, N. A., & Nelson, B. S. (2003). *How educational leaders support and promote teaching and learning? New conceptions of learning and leading in schools*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, April 2003.
- Printy, S., Otten, L., Krantz-Selleck, K., Usiak, M. (2008). *Leadership content knowledge: What do we know?* Working Papers for K-12 Educational Administration Michigan State University.
- Put Reading First. A New Era: Revitalizing Special Education for Children and Their Families*. Retrieved on July 6, 2005, from <https://education.ucf.edu/mirc/Research/President's%20Commission%20on%20Excellence%20in%20Special%20Education.pdf>
- The Qualitative Report* Volume 13 Number 4 December 2008 544-559
<http://www.nova.edu/ssss/QR/QR13-4/baxter.pdf>; Qualitative Case Study

- Methodology: Study Design and Implementation for Novice Researchers; Pamela Baxter and Susan Jack, McMaster University, West Hamilton, Ontario, Canada.
- Reardon, S. F. (2013). The widening income achievement gap. *Educational Leadership*, 70(8), 10-16.
- Resnick, L. B., & Hall, M. W. (1998). Learning organizations for sustainable education reform. *Daedalus*, 127 (4), 89-118.
- The Response to Intervention Network. Retrieved on November 26, 2010 from <http://www.rtinetwork.org/learn/what>
- Robinson, N. (1999). The use of focus group methodology. *Journal of Advanced Nursing*, 29 (4), 905-913.
- Robottom, I. & Hart, P. (1993). *Research in Environmental Education: engaging the debate*. Geelong: Deakin University Press.
- Rowan, B. (1995). Learning, teaching, and educational administration: Toward a research agenda. *Educational Administration Quarterly*, 31 (3), 344-354.
- Sanacore, J. (2004). Genuine caring and literacy learning for African American children. *The Reading Teacher*, 57, 744-753.
- Spillane, J. P., & Halverson, R. (1998). *Local policy makers' understanding of the mathematics reforms: Alignment and the progress of the mathematics reforms*. Paper presented at the annual meeting of the American Educational Research Association. San Diego, April 1998.
- Spillane, J. P., Diamond, J. B. & Jita, L. (2003). Leading instruction: the distribution of leadership for instruction. *Journal of Curriculum Studies*, 35(5), 533-543.
- Spillane, J. P. (2006). *Distributed leadership*. San Francisco: Jossey Bass.
- Spillane, J. P. & Diamond, J. B. (Eds.) (2007). *Distributed leadership in practice*. New York: Teachers College Press.
- Schostak, J. (2006) *Interviewing and Representation in Qualitative Research Projects*. Manchester Metropolitan University: Open University Press.
- Sheppard, B. (1996), Exploring the transformational nature of instructional leadership. *Alberta Journal of Educational Research*, XLII (4), 325-44.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15 (2), 4-14.

- Stanford Center for Opportunity Policy in Education and the National Staff Development Council. *Status of Professional Learning*, 2009-2010.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
- Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools*, 42, 795-819.
- Stein, M. K., D'Amico, & Isreal, N. (1998). *Observations, conversations, and negotiations: Administrators' Support of literacy practices*. Learning Research and Development Center, University of Pittsburgh.
- Stein, M. K., & D'Amico, (1999). *Leading school- and district-wide reform: Multiple subjects matter*. High Performance Learning Communication Project Learning Research and Development Center. University of Pittsburgh.
- Stein, M. K., & D'Amico, L. (2000). *How subjects matter in school leadership*. Paper presented at the annual meeting of the American Educational Research Association, April 2003.
- Stein, M. K., & Nelson, B. S. (2003). Leadership Content Knowledge. *Educational Evaluation and Policy Analysis*, 25(4), 423-448.
- Stake, R. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
- Stodolsky, S. S. (1988). *The subject matters*. Chicago, IL: University of Chicago Press.
- Tilly, W. D. (2008). *The evolution of school psychology to science-based practice: Problem solving and the three-tiered model*. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology V* (pp. 17-36). Bethesda, MD: National Association of School Psychologists.
- U.S. Department of Education. (2001, January). *No child left behind*. Retrieved May 9, 2002 from <http://www.nochildleftbehind.gov/>
- Viadero, D. (2004, February). Complete Coverage In 'Lesson Study' Sessions, Teachers Polish Their Craft, *Education Week*.
- Yin, R. K. (2003). *Case Study Research: Design and Methods*, 3rd edition. Thousand Oaks, CA: Sage Publications.
- Zemelman, S., Daniels, H., & Hyde, A. (1998). *Best practice: New standards for teaching and learning in America's schools*. Portsmouth, N.H.: Heinemann.