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# Best Practice in Early Reading Intervention: Implementing a Reading Intervention Program to Reach Below Level Readers

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# Best Practice in Early Reading Intervention:

# Implementing a Reading Intervention Program to Reach Below Level Readers

by

Bridgett Niedringhaus

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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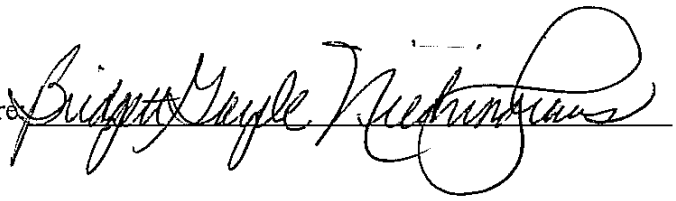
Signature:  Date: 12/7/12

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Abstract

The purpose of this study was to investigate the impact of a reading intervention program used with second and third grade students identified as not meeting grade level expectancy. Studies have indicated students who are not reading at grade level by the end of the third grade have an increasingly difficult time achieving at the rate of their same-age peers. In this mixed-methods case study, the researcher analyzed end of the year report card data for 30 students who received reading intervention using the Rigby Intervention By Design Program, conducted a Content Knowledge Survey with teachers, and performed Literacy Walkthroughs to determine level of program implementation. The Rigby Intervention By Design program is a component of a core-reading program designed to provide teachers the tools for intervening with below-level readers focused on the five pillars of reading instruction: phonics, phonemic awareness, vocabulary, comprehension, and fluency. The research questions in this study included 1) In what ways will teachers' beliefs and perceptions about the Rigby Intervention By Design Program affect the achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year, and 2) In what ways will the implementation of the Rigby Intervention By Design program affect achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year? Findings from the achievement data of the 30 students receiving the intervention program did not show a statistical difference in the number of students increasing or maintaining reading ability before and after the intervention. Furthermore, teachers participating in the Content Knowledge Survey expressed inconsistent feelings about the effectiveness of the Rigby Intervention

By Design program and the impact on reading instruction. However, literacy walkthrough data demonstrated most teachers to demonstrate high levels of program implementation. As a result of the findings, educators may be better prepared to help students with reading difficulties through an understanding of the assistance that these children and their teachers need.

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## Chapter One: Introduction

The ability to read is an essential skill that most people use every day without giving much credence to how those abilities developed. Conversely, the inability to read can have a negative impact on children and later as adults. Illiteracy has a significant impact on our society, both economically and socially. According to the National Adult Literacy Survey, approximately 35% of the prison population performs at the lowest literacy proficiency levels (Coley & Barton, 2006). This compares to the general population of whom 22% achieve at the lowest proficiency levels. Furthermore, research indicates the unlikelihood of students not reading at grade level by the end of third grade catching up with their same age peers before leaving high school (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996; Juel, 1988). Failure awaits an illiterate adult faced with finding a job in a society that relies on written information. Educators must heed the call, reach these struggling readers at an early age, and provide a foundation for success. Every day that goes by without a viable option for reaching below level readers is another day closer to increasing the illiterate population.

According to Pikulski (1994), providing early instruction to children who struggle with reading is essential. The author further stressed that incorporating interventions into the regular classroom instruction would provide the balance necessary in reaching students reading below expected levels. The Florida Center for Reading Research (FCRR, 2007), a center focused on conducting reading research and disseminating information regarding best practice related to literacy and assessment, indicates a high level of commitment must be in place for such achievement in classroom interventions.

**Background**

The Caring Elementary School (a pseudonym created for the study) used in this case study is a suburban school located in the central region of St. Charles County, Missouri. The school serves about 900 students, kindergarten through fifth grade, and employs approximately 100 certified and non-certified staff. Each grade level consists of six or seven classroom sections with a range of 20 to 25 students per class. The Caring Elementary School has enjoyed of history of strong academic achievement in the area of reading and has seen respectable gains on the Missouri Achievement Program (MAP) over the past five years. However, the school has recently experienced an increasing number of students entering school struggling with early literacy concepts and skills.

Teachers at the Caring Elementary School have participated in ongoing professional development that has included studies that focus on Professional Learning Communities, instructional strategies, assessment and intervention. As teachers have progressed in their understanding of the best methods to meet the needs of students, they have identified the necessity to providing a tiered approach to reading instruction to help increase achievement of students reading below grade level. The Friendly School District provided personnel resources for supporting literacy at both the district and building level including: district literacy leaders, district content leaders, building literacy coaches, and building reading teachers.

The core reading materials that the teachers in the researched school use, Rigby Literacy by Design, provided a foundation for teaching reading to the general population. Teachers have found that while the core-reading program meets the needs of many of its learners, it is not meeting the specific needs of all learners. The second grade and third

grade teachers at the Caring Elementary School explored research-based materials that could assist in meeting the needs of below level readers or students struggling with specific reading skills. Teachers brought concerns to the building level administrator, district-level curriculum coordinators, and central office administrators in a quest to find support in their journey. After much discussion about how to best use the newly adopted materials, Rigby Literacy by Design, and with limited funding available, a resource was identified for this group to utilize.

In 2009, the Friendly School District purchased a resource kit, "Rigby Intervention by Design," published by the same publisher of the district's core reading program, Rigby Literacy by Design. This kit, paired with the core reading program the district was using, Rigby Literacy by Design, supplied teachers with a series of skill specific intervention cards to use with students identified as below level readers or students struggling with specific reading skills and provided professional development and support for implementation. The case study will focus on second hand data obtained from students at the end of first grade, second grade and third grade academic years, that have been identified as reading below grade level or struggling with specific reading skills. It will also follow their progression to the end of third grade as well as take a look at the beliefs and perceptions of the certified staff using the program and the implementation of the program. Data will focus on the Friendly School District's descriptors for reporting reading progress on the report card and indicate achievement as A- Above, M- Meets, or NM- Not Met grade level expectations.

**Statement of Issue/Problem**

Developing good reading strategies is a skill that students should acquire early in their school career. Research indicates that if children do not become successful readers by the end of third grade, it is difficult for them to catch up with their peers (Dorn, French, & Jones, 1998). The bulk of this initial learning takes place in the elementary school setting where teachers are trained in facilitating pre- reading skills such as concepts of print, letter and sight word identification as well as isolated letter sounds. However, it is understood that not all students develop at the same pace and therefore some students move on with stronger foundational reading skills than others do. For early readers and their teachers this can be especially frustrating. Teachers need an arsenal of intervention strategies to implement in a timely manner. This case study will evaluate the achievement outcomes of a reading intervention program, Rigby Intervention by Design, when implemented with students who are struggling with specific reading skills or reading below level for the current grade placement as measured by the Friendly School District's report card.

**Purpose of Study**

The study of cases is a common practice among many fields of research and provides valuable information on individual cases. Frankel and Wallen (2008) refer to a case as a study of an individual, classroom, school or program. In this case study the researcher will follow one group of 30 students as they progress from first through third grade, located in the same school. By studying a single, unique case the researcher would hope to gain valuable insight that could determine the effectiveness of a program, Rigby Intervention by Design.

Rigby Intervention by Design has been identified as an intervention tool, recognized in a Response To Intervention model, to implement when students are falling below grade level or experience difficulty with specific reading skills. Rigby Intervention by Design takes into consideration specific skill deficits for struggling readers and provides teachers with timely and direct intervention strategies for skills identified in the five pillars of reading instruction: Phonics, Phonemic Awareness, Vocabulary, Fluency, and Comprehension. To be most effective, The Florida Center for Reading Research (2007) recommends that the five pillars of reading be taught explicitly within classrooms that are powerful and engaging use writing activities to support literacy, and provide students with multiple opportunities to read interesting text and complete challenging literacy activities.

The researcher defines the purpose of this case study in terms of identifying a tool that teachers can have at their disposal to remediate early reading difficulties in those readers that have been identified as below-level readers or who struggle with specific reading skills by the end of an academic year. A secondary purpose of this case study is to conduct an evaluation of Rigby Intervention by Design to determine if it is meeting the needs of both the student and the teacher. Data was collected and examined from the end of the academic year in first grade, second grade, and third grade to determine if students are making gains in their reading ability as reported on the Friendly School District's report card. Achievement levels are reported as A (above grade level expectancy), M (meets grade level expectancy), and NM (not meeting grade level expectancy). Additional research questions investigated during this case study include how the beliefs and perceptions of teachers using the Rigby Intervention by Design program will affect

the achievement of students who are reading below grade level or students struggling with specific reading skills. An electronic survey distributed to teachers regarding their beliefs and perceptions of the intervention program, focused on the five pillars of reading instruction. Finally, literacy walkthroughs conducted during the literacy intervention block, determine the level of implementation of the Rigby Intervention by Design program. Teacher participants observed three times each, using a literacy walkthrough checklist to determine implementation of the Rigby Intervention by Design program with below grade level readers or students struggling with specific reading skills.

**Independent Variables**

For reading intervention to be most effective, the Florida Center of Reading Research (2007) suggests using explicit instruction in the five pillars of reading within the classroom. In this case study, implementation of Rigby Intervention by Design, focused on the five pillars of reading, in conjunction with the Rigby Literacy by Design core reading program at both the second and third grade level. The purpose was to provide differentiated reading intervention to a group of approximately three to five students at the reader's instructional level, based on specific skill deficits. This case study identifies the independent variable as the fidelity of the reading interventions in an attempt to increase reading skills for students in second and third grade. The effectiveness for improving reading achievement, measured on the Friendly School District's report card in second and third grade, was examined. If the reading intervention program, Rigby Intervention by Design, proved successful as an instructional intervention teaching resource, the result would be a significant increase in reading achievement, measured by the Friendly School District's report card.

**Dependent Variables**

The dependent variable in this case study is the effectiveness of Rigby Intervention by Design for students in second and third grade as measured by the Friendly School District's report card indicators; A-Above grade level expectancy, M-Meets grade level expectancy, NM- Not Meeting grade level expectancy at the end of the academic year. If successful, students would demonstrate statistically significant improvement in reading achievement at the end of the academic year, as the result of having participated in reading intervention using the Rigby Intervention by Design resource.

**Research questions**

1. In what ways will teachers' beliefs and perceptions about the Rigby Intervention by Design Program affect the achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?
2. In what ways will teacher's implementation of the Rigby Intervention by Design program affect achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?

**Hypothesis**

H1) Students at the end of first grade who are reading below grade level or struggling with specific reading skills will make adequate progress to read at or above grade level by the end of the second grade year as a result of receiving intervention using

the Rigby Intervention by Design Program as measured by the Friendly School District's report card data.

H0) Students at the end of first grade who are reading below grade level or struggling with specific reading skills will make adequate progress to read at or above grade level by the end of the second grade year as a result of receiving intervention using the Rigby Intervention by Design Program as measured by the Friendly School District's report card data.

H2) Students who recovered at or above grade level status by the end of the second grade academic year will maintain at or above grade level status by the end of third grade as measured by the Friendly School District's report card data.

H0) Students who recovered at or above grade level status by the end of the second grade academic year will not maintain at or above grade level status by the end of third grade as measured by the Friendly School District's report card data.

**Limitations**

While there is limitations in any case study both quantitative and qualitative limitations must be addressed. Objectivity, reliability, and validity are limitations that must be considered in any study (Fraenkel & Wallen, 2008). According to McMillan (1999) decisions are best made using multiple factors and educators should balance assessment data with other information.

**Participant characteristics.** According to Fraenkel and Wallen's (2008) definition, the first threat to internal validity that needs to be addressed is participant characteristics. This may result from the way "individuals or groups differ from one to another in unintended ways that are related to the variables to be studied" (Fraenkel &

Wallen, 2008, p. 179). In this case study, participants in the groups differed in terms of age, gender, socioeconomic background, ethnicity, reading ability and attitude. Age, maturity, and developmental skills may influence the ability of the child to progress with their same grade peers. The background or socioeconomic status of the child may affect student achievement due to lack of exposure to reading materials outside the school setting and/or the lack of importance placed on reading by caregivers.

Selection of student participants in this study was based on the need for reading intervention and therefore the option of random selection was not offered. Since the researcher had no part in the selection of students participating in the reading intervention, there is likelihood that the participants are not equal; however, the grade level students enrolled in during the study remains consistent throughout the study.

Noted limitations existed when reviewing the timeline in program implementation for each grade level. Possible reasons for this could include the fact that the researcher observed second grade teachers during their second year of implementation of the Rigby Intervention by Design Program and observed third grade teachers during their implementation year of the program.

Another participant limitation included the variety of skill deficits students experienced in the five pillars of literacy: phonemic awareness, phonics, comprehension, fluency, and vocabulary. While some students were identified as below level readers, others were identified as having a specific skill deficit however they were not identified as a below level reader overall.

**Mortality.** Another limitation to this study was mortality or loss of participants throughout the study. Fraenkel and Wallen (2008) state that "for one reason or another…

some individuals may drop out of the study. This is especially true in intervention studies since they take place over time" (p. 179). With the data in this study spanning a period of two years, there may have been students who moved resulting in a loss of overall participants.

In the qualitative portion of this study, loss of participants was also evidenced. An electronic survey was used to collect teacher's thoughts regarding reading intervention and the use of the Rigby Intervention by Design resource materials. Fraenkel and Wallen (2008) indicate that approximately 20% or more of the subjects involved do not return forms or participate fully. A margin of error also exists with survey questions, as they may have been interpreted differently by various teachers, affecting the manner in which they responded. Furthermore, the interpretation of the results provided by the survey is subject to the biases and interpretation of the researcher. Finally, loss of subjects also has the potential to introduce bias. This occurs when the participants who were lost may have responded differently than the respondents, resulting in a different outcome.

**Objectivity**

Objectivity in this study looked at the absence of judgments that were made as a result the study. Fraenkel and Wallen (2008) attest that while complete objectivity in a study is rarely obtained, measures should be put in place to limit the barriers to the objectivity of a study. The researcher in this study serves in a supervisory role and implemented precautions in this study to alleviate data collector bias, described by Fraenkel and Wallen (2008) as ensuring that the data collectors, or in this case the facilitator, lack the information they would need to distort the results. The facilitator in

this study was unaware of the hypothesis and research questions involved in the study, allowing the researcher to summarize and draw conclusions regarding the data obtained without a distortion of the data or the outcomes influenced by the facilitator. The researcher in this study appointed a facilitator to invite staff members, who work with second and third grade students, to participate in an electronic survey for the study. Each staff member received an electronic content knowledge survey (see Appendix C), from the study facilitator, to reflect their beliefs and perceptions about the Rigby Intervention by Design program and the effects on students reading below grade level or students struggling with specific reading skills. The survey conducted through Survey Monkey, an online survey tool, allowed the researcher to design a survey and allow a facilitator to collect responses and allow the researcher to analyze results.

To maintain objectivity in the quantitative portion of the study, the researcher did not use student names however used an alternate method for identifying and tracking student progress in order to maintain objectivity.

**Reliability**

**Instrument**. Fraenkel and Wallen (2008) contend that in a quantitative study any inferences made should be based on data, collected through a reliable instrument with measurement errors taken into consideration when reporting data. Furthermore, Fraenkel and Wallen (2008) contest that reliability is focused on the consistency of scores when the same measure is used, regardless of what the instrument is measuring. However, when referring specifically to a qualitative study, many times the emphasis is placed on the integrity of the researcher. The researcher acknowledges that the use of informal assessments used for determining whether students are reported as above, met, or has not

met grade level expectations on the Friendly School District's report card, as a subjective means of evaluating individual student reading ability. While intermediate grades have consistent instruments to measure achievement such as the Gates-Macginite standardized test, the Friendly School District did not use a consistent formal assessment measurement for students in first through third grade and therefore the Friendly School District's report card was the consistent tool chosen to compare achievement levels over the course of the case study. Fraenkel and Wallen (2008) identify the unlikelihood of performing the same on an assessment, from one occasion to the next, a result of factors such as motivation, energy, anxiety, testing in a different situation and so on. Such factors can result in an error of measurement. Various texts and text levels in accordance with the students reading ability became the focus of the assessment leading to teacher subjectivity.

The researcher also acknowledges the Friendly School District's Report Card possesses limitations. During the years of intervention implementation the report card tool, previously in place, did not change. This posed a few limitations such as alignment in reporting progress based on intervention recommendations and accessibility after the study completion. While the intervention tool used in the study, Rigby Intervention By Design, highlights the need to focus on the five pillars of literacy for intervention instruction the report card did not convey progress in each of those areas. Instead, the report card merely focused on three levels of achievement, reported quarterly: Above (A), Met (M), and Not Met (NM). Another limitation of the Friendly School District's Report Card included absence of an electronic form of reporting progress. During the period of research teachers manually filled out report cards. This limited the researcher in going back and looking at student progress per quarter. In instances where students moved and

were no longer enrolled in the Caring Elementary School, the researcher had no means available to reference previous report card achievement levels.

**Validity**

**Instrument**.When a researcher conducts a study, emphasis placed on the instrumentation process as well as the instruments used to measure the validity of the study (Fraenkel & Wallen, 2008). Frankel and Wallen (2008) would contest that validity refers to the use of a specific instrument, not the instrument itself, which supports any inferences a researcher makes based on the data collected using a particular instrument. The instrument chosen by the researcher must provide the desired information using an instrument to serve a purpose. Validity would pose the questions, "Do the results of the assessment provide useful information to the researcher about a particular topic being investigated?" (Fraenkel & Wallen, 2008). When a conclusion is supported by data collection from a variety of instruments, it enhances the validity of the study and is referred to as a triangulation of data (Fraenkel & Wallen, 2008). In this study the researcher is using three instruments, an electronic survey of teachers, a walkthrough observation form focused on program implementation, and the Friendly School District's report card, to support inferences made regarding the study.

**Study.** According to Maxwell (2005) a measure of the relationship between the conclusion or interpretation of results and the methodology used should be studied. By being aware of any bias that may be in place and working to eliminate them in both the quantitative and qualitative portions of the research the researcher can defend the validity of a study. In a qualitative study, the perspective of the researcher can bring biases. Opportunities for qualitative researchers to enhance validity include using a variety of

instruments to collect data, also referred to as triangulation (Fraenkel & Wallen, 2008). In this study, the researcher will use three instruments to draw conclusions; an electronic survey of teachers, a walkthrough observation form focused on program implementation and the Friendly School District's report card.

**Definition of Terms**

**Comprehension.** The ability to actively make meaning, using in-the-head processes, which enable the reader to pick up all kinds of information from the text and construct the author's intended meaning (Fountas & Pinnell, 2006).

**Fluency.** One of the most important factors impacting students in their overall comprehension; fluency is focused on reading orally with speed, accuracy, and proper expression (NRP, 2000).

**Intervention.** A plan, based on data, which ensures every student will receive additional time and support for learning as soon as they have trouble in acquiring essential skills and knowledge. Many researchers refer to a three-tiered model, which focuses on assessment and instruction. Particularly in the second tier, a focus on targeted-instruction beyond the core curriculum is provided to students in a small group learning opportunity (Richards, Pavri, Goiez, Canges, & Murphy, 2007).

**Rigby Intervention by Design.** Used as a resource component of a core-reading program published by Rigby, Intervention by Design is a set of materials designed to provide teachers the materials necessary in providing intervention for below-level readers. Rigby Intervention by Design is used to intervene with students on specific skill deficits they may experience in one of the five pillars of reading instruction: phonics, phonemic awareness, vocabulary, comprehension, and fluency (Opitz, 2008).

**Phonemic awareness**. Awareness that words are composed of separate sounds, phonemes, blended to produce words (Pressley, Gaskins, & Fingeret, 2006).

**Phonics.** The NRP (2000) states that "phonics instruction is a way of teaching reading that stresses the acquisition of letter-sound correspondences and their use in reading and spelling" (p. 8).

**Response To Intervention.** Also referred to as RTI, Response To Intervention focuses on the need to answer the question, "What will we do when students don't learn?" (DuFour & Eaker, 1998). RTI is rooted in the idea that every child can succeed by shifting the responsibility from special education teachers and curriculum to both special and regular education teachers and the curriculum. By being proactive at the first sign of students falling behind, RTI suggests a quick approach to identification and intervention for students early rather than waiting for them to fall so far behind they risk failure. The International Reading Association's Commission on RTI (2009) has identified three goals for RTI instruction: systematic assessment of student performance, differentiated instruction, and high quality professional development for staff (Walker-Dalhouse, Risko, Esworthy, Grasley, Kaisler, McIlvain, & Stephan). While there has not been an agreement on methodology for implementing RTI, a focus has been placed on assessment/identification and instruction.

**Vocabulary**. Learning meanings of new words or words that a reader recognizes in print (Beck, McKeown, & Kucan, 2002).

**Professional Development**

Many times, the term professional development comes with a negative connotation, referring to long days of "sit and get" meetings with little information to go

back and apply. Mizell (2010), author of *Why Professional Development Matters*, refers to professional development occurring in a more informal context, such as discussions among colleagues, independent reading and research, observing another colleague at work, or other types of learning from a peer. While college and university programs provide a solid foundation for such learning, they cannot provide the range of learning experiences necessary for graduates to become effective educators.

In the case of the recent college graduate, two years of coursework, field experiences, and student teaching prepare an eager graduate to teach any grade from kindergarten to fifth grade. This hardly prepares a new teacher with the skills, knowledge, or subject area expertise necessary to be an effective instructor in any content area. In the case of the recent college graduate, they have received coursework that covers child development in the early years, but lacks information on how this should inform instruction (Bornfreund, 2012). Courses in how to teach reading lack a solid foundation in the five pillars of literacy at the various elementary levels, which looks very different for a first grade student than for a fifth grade student. Even more glaringly different are early childhood courses. Early childhood courses need to address language and literacy development in contrast to the instructional teaching methods or strategies for teaching literacy skills focused on vocabulary, comprehension, and fluency (Bornfreund, 2012). By addressing the need to revamp the teacher preparation programs and providing graduates with a foundation in teaching literacy skills schools will be equipped with young teachers that are ready to face a room full of eager young students. These graduates come prepared to collaborate at a collegial level in their new schools.

Schools should be a place where both adults and students learn. When teachers and administrators invest in development, a sustainable culture of learning throughout the school and supports educators in their quest to engage students in learning. By modeling learning, teachers show students the importance of learning. A teacher can never know enough about student learning or what impedes a student's progress. Professional development is the only way for teachers to gain such knowledge.

According to DuFour, DuFour, Eaker, and Many (2006), "Professional learning communities operate under the assumption that the key to improved learning for students is continuous, job embedded learning for educators." Tomlinson (1999) challenges school and district-level personnel to support changes in instruction through developing an understanding of reading instruction to introduce, nurture, and encourage teachers through the learning process. In order for instruction to be effective we must take time to train and develop teachers and other qualified staff. Professional development is an essential component when implementing change. Although many models of professional development exist, Speck and Knipe (2005) define high quality professional development as "a sustained collaborative learning process that systematically nourishes the growth of educators (individuals and teams) through adult learner-centered, job embedded processes. It focuses on educators' attaining the skills, abilities, and deep understandings needed to improve student achievement" (pp. 3-4). By giving time and structure for collaboration, we can establish a powerful foundation for educators to learn and grow through the inquiry process, which has been powerful amongst organizations, including education. This process no longer has to take on the appearance of the typical "sit and get" workshop. In many schools, educators have taken to on the job learning by

observing in each other's classrooms. Reeves (2010) indicates that for teachers to focus on effective teaching strategies, they must focus on deliberate practice. He concludes that deliberate practice includes performance components such as coaching, feedback, and self-assessment. Darling-Hammond and Richardson (2009) have looked at the commitment necessary to achieve high levels of professional learning. The authors synthesized professional learning research and noted the following:

> Studies of the effects of professional development lasting 14 or fewer hours showed no effects on student learning…The largest effects were found for programs offering between 30 and 100 hours spread out over a 6-12 month time. (p. 49)

While this time commitment may seem overwhelming, rethinking the way we have always run our beginning of the year kickoff meetings, faculty meetings and professional development days can help us get closer to such a model.

Unfortunately, several studies indicate that many teachers are not prepared to teach reading, receiving little formal instruction in reading development, and disorders in their educator preparedness course work (McCardle & Chhabra, 2004). With this in mind, we must create school-based training programs that provide teachers with the knowledge and skills necessary to deliver instruction and intervention for struggling readers.

Fullan (2008) highlights effective organizations that view working and learning to work better as the balance needed to avoid superficial learning. Schools must address the need for learning to take place on the job to address areas that are in need of improvement. While working in groups in and of itself is not the answer, Fullan (2008)

outlines three conditions under which purposeful peer interaction is effective: (1) when the larger values of the organizations and those of individuals and groups mesh; (2) when information and knowledge about best practices are shared; and (3) when monitoring practices are in place to identify ineffective and effective practices. The professional learning communities' model of collaboration allows such conditions to exist and thrive. Moore and Whitfield (2009) point out that helping teachers develop a repertoire of strategies that can be used when planning for instruction will allow staff members to feel a sense of collaboration and collegiality as opposed to feeling alone without any support.

**Summary**

Teachers need information on the achievement of each of their students to make informed decisions in regards to instruction (DuFour & Eaker, 1998). Goodman (2008) reports that more young people fall between the cracks because of problems learning to read than any other academic issue. In summary, the problem statement for this study reflects the concern that too many children struggle to read, often times falling further behind with each passing year. Teachers must be equipped to identify these struggling students early and have a plan of action to help them catch up with their same-aged peers.

Chapter 2 will review the components needed in providing teachers and student the best possible conditions for success when implementing a reading intervention program. Current research with regard to the importance of literacy skills and instruction will also be reviewed.

# Chapter Two: Review of Literature

## Introduction

Educators are facing high levels of accountability for increasing student achievement each day (Guilfoyle, 2006). These increases are not automatic, but are the result of intentional, prescriptive efforts by teachers, administrators and specialists who support student learning. The business world uses the term *kaizen* for this concept of making small improvements every day that lead to large improvements over time (Smith, Fien, Basaraba, & Travers, 2009). To use the concept of *kaizen* in the world of education, educators must understand how to use data to make decisions that are in the best interest of the students they support (Smith, et al., 2009). Fortunately, accomplishing this work alone is not the only option.

The purpose of this study was to determine the relationship between Intervention by Design, and the achievement growth in reading for second and third grade students. Specifically, this study targeted students performing below the expected grade level or struggling with specific reading skills as reported on the researched school district's report card. The review of literature included historical background in reading research, the importance of Professional Learning Communities in identifying and planning for students in need of intervention, Response To Intervention legislation, effective instruction and intervention (i.e., Intervention by Design) for students at risk for reading failure, assessment, and professional development for teachers in the area of reading instruction and assessment.

This literature review presents an examination of the issues relevant to readers in need of intervention by looking at historical findings regarding reading research,

legislation regarding below level readers, and the supports needed for teachers and students in implementing a reading intervention program, including professional learning communities, best practice in reading instruction and intervention, assessment, and professional development.

**Historical Background in Reading Research**

Shaywitz (2003) characterized reading as an extraordinary yet distinctly unnatural process formed in childhood yet taken for granted by many. For years, practitioners described reading in terms of motivation to practice with a great deal of support stemming from the home environment. However, research has shown that reading does not come naturally for all as has been assumed. While many children look forward to learning to read, for others it is a daunting task filled with frustration and difficulty. Shaywitz speaks specifically about students with dyslexia and the challenge they experience between understanding the spoken word and deciphering the same written words. Parents and teachers alike struggle with what may be going wrong in their approach to teaching these students to read, often times coming away frustrated and guilt-ridden.

For years, researchers have looked at the issue of literacy attainment, including the specific components of reading instruction, which help students reach the ultimate goal of reading for meaning. The ability to read and comprehend text on grade level is of significant importance to a child throughout the educational journey. In the late 19th century, physicians saw children described as bright and motivated, from involved and educated families, and yet could not learn to read (Shaywitz, 2003). Characterized as "word-blindness" physicians documented that students seemed to have all the intellectual

and sensory equipment needed for reading, yet for some unexplained reason they could not read the written word. These same students seemed to grasp mathematical concepts, even discerning the numeral *seven* but unable to read the written word *seven*. Developmental dyslexia describes a type of word blindness (Shaywitz, 2003). This type of research has provided a springboard for physicians and educators to study, understand, and treat reading disabilities for ages to come.

In 1955, Flesch took the educational world by surprise with his publication of *Why Johnny Can't Read* (Flesch, 1955). In his book, Flesch emphasized the importance of specific phonics instruction as a critical component of a child's early literacy instruction. He noted that successful readers have a firm grasp on phonics and apply that strategy to their daily reading.

Funded by a grant from the Carnegie Corporation, Chall (1967) embarked on a three-year journey to either confirm or refute the earlier claims made by Flesch. She published Learning to Read: The Great Debate, analyzing over 60 research studies in which she evaluated the various approaches and techniques used to teach children to read, including an examination of Basal programs used by many schools. In her analysis of early reading programs, Chall believed the outcome would both help solidify what researchers already knew about beginning reading, and discover any knowledge gaps that remained. In the end, Chall concluded that phonics and whole language have their rightful roles in an early reading program. Chall stated,

> Most schoolchildren in the United States are taught to read by what is termed a meaning-emphasis method. Yet the research from 1912 to 1965 would indicate that a code-emphasis method, i.e., one that views beginning reading as essentially

> different from mature reading and emphasized learning of the printed code for the spoken language, produces better results, at least up to the point where sufficient evidence seems to be available, the end of third grade (p. 307).

In the end, Chall believed the most pressing need facing the teaching community was a reorganization of beginning reading instructional methods.

Yet another unflattering light cast on American education in 1983 with the publication of *A Nation at Risk: The Imperative for Educational Reform*. This report by the National Commission on Excellence in Education addressed both the nation and the Secretary of Education. The document, which garnered a great deal of criticism, made the following claims about the state of education in our country:

- Over 20 million American adults are functionally illiterate according to the simplest tests of everyday reading, writing, and comprehension. Approximately 13% of all 17 year olds in the United States can be considered functionally illiterate, which may run has high as 40% among minority youth.
- The average achievement of high school students on most standardized tests is now lower than when Sputnik was launched.
- More than half the population of gifted students does not match their tested ability with comparable achievement in school. The College Board's Scholastic Aptitude Test (SAT) demonstrates a unbroken decline from 1963 to 1980, with average verbal scores falling over 50 points and average mathematics scores dropping nearly 40 points.
- Many 17 year olds do not possess the critical thinking skills we should expect of them. Nearly 40% cannot draw inferences from written material; only

about 20% can write a persuasive essay; and only one-third can solve multi-step mathematics problems.

- Average tested achievement of students graduating from college is lower.
- Business and military leaders complain that they are required to spend millions of dollars on costly remedial education and training programs in such basic skills as reading, writing, spelling, and computation (National Commission on Excellence in Education, 1983, pp. 2-3).

Opponents to the *A Nation at Risk* publication claimed that the focus of the piece was too narrow and restricted, devoted a focus on high school years, and virtually ignored the primary and intermediate grades. While many critics claimed the report to be inept, the study of reading achievement, mathematics and other core subjects continued to be the topic of discussions and scrutiny amongst academic researchers.

In response to the claims of illiteracy among high school students and the ever changing demands for higher levels of literacy in an increasing competitive technological society, the United States Department of Education (USDE) and the United States Department of Health and Human Services asked the National Academy of Sciences to establish a committee to look at a prevention model for reading difficulties. The goals of this endeavor were to comprehend and translate the current research base for all stakeholders, and to convey their findings through publications, conferences, workshops, or other activities (Snow, Burns, & Griffin, 1998). *Preventing Reading Difficulties* was the resulting synopsis of this research. The publication consisted of recommendations for identifying children at risk in their literacy programming, and outlined specific research based programs and instructional strategies focused on preschool and primary aged

children. In addition, the publication presented ideas on promoting higher order reading and thinking skills in all children.

The Florida Center for Reading Research (FCRR) (2007) cites that an increasing number of students in the United States struggle to become proficient readers by the time they reach the fourth grade. The NAEP, an assessment administered to fourth and eighth grade students since 1971, indicates that student performance in reading has been consistent during a 30-year period. This is not a positive finding. On the 2003 assessment, 37% of all fourth graders achieved below the basic level, indicating they do not possess the skills necessary to support the grade-level work that involves reading skills (Torgesen, 2005). The FCRR (2007) states that if students are to become proficient readers, teachers must offer high-quality instruction in the following ways:

1. Provide explicit, differentiated reading instruction for all students.
2. Offer engaging opportunities for all students to practice reading.
3. Facilitate an organized classroom

An acute awareness of these facts motivated the authorization and signing into law the No Child Left Behind (NCLB) Act of 2001 put into motion by President George W. Bush. The requirements of NCLB established goals, incrementally increasing each year, with the mandate that all schoolchildren will be proficient readers by 2014 (NCLB Act, 2001). School districts all over the United States searched for the programs and interventions necessary to ensure that students were making Adequate Yearly Progress (AYP) toward these goals (U.S. Department of Education [USDE], 2003).

In March 2010, President Obama released a reauthorization of the previous NCLB Act of 2001. This blueprint builds on the reforms made in response to the American

Recovery and Reinvestment Act (ARRA) of 2009, which among other things offered financial aid directly to local school districts (NCLB, 2001). While some of the core policies developed in the NCLB Act of 2001 were maintained, the blueprint focused on more specific accountability and supports for states and school districts, especially those deemed as high-poverty and high-risk schools. The transformation from school and individual student proficiency to differentiation based on student growth and progress is the driving force behind school accountability (USDE, 2003). The blueprint acknowledges that special recognition and reward provided to those school district and states that show significant progress in closing the student achievement gap. While a focus on curriculum development is essential, the blueprint acknowledges the need to provide schools, districts, and states resources for curriculum development, including time for collaboration.

**Professional Learning Communities**

While clarifying the mission of the school typically includes belief about student learning, we must make clear what we believe about student learning in order to gain focus. According to DuFour and Eaker (1998) faculty need to bear in mind, the following four questions as related to student learning:

1. What do we want students to learn? (curriculum)
2. How will we know when they have learned it? (assessment)
3. What will we do if they don't learn it? (intervention)
4. What will we do if they already know it? (enrichment)

When teachers begin to function as a professional learning community, they take ownership of student learning and begin the work of answering each of these questions.

The staff then designs a plan that addresses the specific needs of each learner by providing extra time and support (DuFour, Eaker, & DuFour, 2005). The foundation of Response To Intervention (RTI) is based on the need to answer the third question, "What will we do if they don't learn it?" The response to struggling students should be timely, directive, and based on intervention rather than remediation (DuFour et al., 2005).

The concept of improving schools through collaborative efforts, such as developing Professional Learning Communities, is gaining the attention of the education community; however, this term describes a plethora of scenarios taking place in education.

> To define professional learning communities would focus on educators committing to working collaboratively in ongoing processes of collective inquiry and action research to achieve better results for the students they serve. Professional learning communities operate under the assumption that the key to improved learning for students is continuous, job embedded learning for educators. (DuFour et al., 2006, p. 67)

DuFour and Eaker (1998) have proposed, "The most promising strategy for sustained, substantive school improvement is developing the ability of school personnel to function as a professional learning community (p. 124)." In a professional learning community educators construct an atmosphere of cooperation, personal and professional growth, and collegiality, as they come together to accomplish that which could not be accomplished alone (DuFour & Eaker, 1998). By building a collaborative culture, teachers have a support network or team that is accessible and has the ability to provide feedback on teaching and learning. Research indicates that collaborative interaction that

reflects on both strengths and missing expertise is indicative of a healthy school climate (Speck & Knipe, 2005). Fullan (1993) stresses the progression of collaborative teams in the improvement process as one of the core requisites of our society. The professional learning community model is based on the idea that formal education ensures not only those students are taught, but also that students will learn (DuFour et al., 2005). The shift from teaching to high levels of learning is the basis for the mission of the school.

In summary, professional learning communities provide an avenue for teachers to collaborate and develop a plan for how to meet the need of all students. Four guiding questions sum up the work of the professional learning community, authored by DuFour and Eaker (1998). The third question of the PLC outlines the work focused on intervention. Research indicates that providing this collaborative, problem-solving culture will present educators with the time and support needed to tackle the ever-present challenge of increasing student achievement.

**Response To Intervention**

On December 3, 2004, President Bush signed into law the Individuals with Disabilities Education Improvement Act (IDEA), which differs from the preceding account specifically in one important area (IDEA, 2004). Previously, diagnosticians used the Intelligence Quotient (IQ) as a basis for identifying the achievement discrepancy for identification of learning disabilities. They may now use RTI, Response To Intervention, as an alternate method. In the discrepancy model, a significant gap needs to exist between IQ and achievement in order for students to qualify as learning disabled. In some cases, premature identification of students may occur when poor teaching could actually be the culprit (Fuchs & Fuchs, 2006).

The discrepancy model does not take into account those students who are achieving at low levels or found to have a relatively low IQ; however, no significant discrepancy exists. The Response To Intervention proposal intended to help educators connect student achievement data and classroom instruction, with the expectation that students will respond to the differentiated instruction and manifest in fewer students placed in special education (Walker-Dalhouse et al., 2009). Moore and Whitfield (2009) characterize the RTI model as, "A prevention model for all students rather than a wait-to-fail model, outlined for students who need intensive and specific intervention to determine the extent needed for progress." ( p. 622) In this model, students are receiving extra help or intervention at the first sign of trouble rather than waiting until the student is so far behind they cannot easily close the achievement gap between themselves and their peers. While consensus on one precise mode for implementing RTI does not exist, according to the law it is apparent that RTI is derived from the method of considering assessment and instruction based on thorough, scientific research (Kame'enui, 2007). In the article, "Building School Wide Capacity for Preventing Reading Failure," (Moore & Whitfield, 2009) the authors emphasize the need to establish a prevention model rather than waiting for students to fail. The heart of RTI in regards to reading considers that through the early detection of struggling readers, educators can offer timely, intensive, expert reading instruction. This will enable students to close the achievement gap and be placed in special education only if and when the reading instruction has not garnered significant growth in their reading development (Mokhtari, Porter, & Edwards, 2010). Educators must be prepared with a system of interventions designed to meet the unique needs of each student. Buffum, Mattos, and Weber (2012) suggest addressing three

critical considerations when creating a system of interventions. The first consideration is to have an arsenal of effective interventions to reach students for a variety of reasons. Second, there must be time built into the school day to provide non-invitational support for students without missing core classroom instruction. Finally, there must be timely, systematic processes in place to identify and monitor students in need of additional support.

Response To Intervention proposes a pyramid or tiered model of intervention. Research indicates, "A multi-tiered model allows school teams to systematically differentiate instruction for students who are on track for meeting critical beginning reading goals, students who are at some risk for not meeting critical beginning reading goals" (Smith et al., 2009). Many researchers, including Richards et al., (2007) propose a three-tiered reading intervention model consisting of core reading instruction, targeted, systematic interventions and increasingly intensive interventions at the final level.

Studies emphasize the importance of high caliber Tier 1 instruction to meet the needs of most students. According to Richards et al. (2007), educators are meeting the needs of approximately 70-80% of students in the general education classroom, leaving approximately 20-30% of students who need additional instruction or intervention at the next level. In an effective RTI system, data triggers need to be established within the school to determine when students would move between each tier of intervention.

**Tier 1.** Tier 1 provides a focus on the core curriculum taught for all students. Allington (1983), former president of the International Reading Association and National Reading Council, conveyed in an interview with Rebora (2010) that Tier 1 is the most critical of the three tiers because there is great need and hope in strengthening instruction,

particularly in reading. Allington goes on to say that, many of our kindergarten and first grade teachers are well skilled in social and emotional support, however they are not very competent in teaching content areas such as reading. Tier 1 provides opportunity for all students to access the general education curriculum in a classroom setting. This may contain core components of a balanced literacy model, including guided reading groups based on reading level or skill specific deficits.

**Tier 2.** The next level of instruction, Tier 2, consists of an intentional and systematic delivery method for those students that need assistance beyond the core instruction, taking place in small groups and frequently monitoring for progress (Richards et al., 2007). By evaluating the data collected through progress monitoring, the teacher determines whether the intervention is successful and the student can return to Tier 1 instruction. If unsuccessful, according to the data, the student should move to Tier 3 for intensive intervention. Rebora (2010) cautions that providing students extra intervention support should come from a qualified instructor who is a well versed in expert reading instruction. Allowing paraprofessionals, parent volunteers, or special education staffs, who has limited reading expertise, to deliver instruction is simply not good enough. Textbook companies are becoming more aware of the increasing need for support at the Tier 2 level and are developing programs that attempt to meet the needs of students reading below grade level. Buffum, Mattos, and Weber (2012) caution that there is no "silver bullet" in addressing the needs of all at-risk readers, however when teachers come together to evaluate scientifically researched, targeted products they can identify the most effective teaching practices and resources available for students. Programs such as Intervention by Design are trying to provide teachers with resources that address

foundational skills, meet individual needs, and provide a way to monitor progress of the student reading below level (Farr, Beck, & Munroe, 2005).

**Tier 3.** The final level of instruction, Tier 3, provides a more intensive intervention. Research indicates that Tier 3 instruction affects approximately 2-5% of students who did not adequately respond to Tier 1 and Tier 2 interventions (Richards et al., 2007). The number of students in the intervention group decreases as the intensity of the intervention increases. Tier 3 interventions, characterized as specific instruction that occurs in skill specific groups, occurs 45-60 minutes daily and generally replaces part of the core curriculum while the intervention takes place. Smith et al. (2009) points out that while the typical school will have the resources to provide both Tier 2 and Tier 3 supports, students can vary greatly in the initial skills of beginning readers; thus educators should tailor the intensity of each tier based on their student population.

**Factors that Affect Early Childhood Reading Abilities**

Research suggests that reading instruction received in the early years affects at least 60% of students in terms of overall reading success (Lyon, 2000). Lyon (2000) further went on to convey the importance of possessing good vocabulary and speaking skills, phonemic awareness, and bring background knowledge to their reading experiences. Unfortunately, some children have limited exposure to reading outside of school and need the support of educators to develop such reading skills. For example, children from poverty-stricken homes, who lack language proficiency, raised by parents with poor linguistic and reading skills, are more likely to experience reading problems due to the influence of language related skills on the ability to read effectively (Lyon, 2000).

The following appears in a report from the Committee on the Prevention of Reading Difficulties in Young Children and the National Research Council (as cited by Snow et al., 1998)

> Reducing the number of children who enter school with inadequate literacy-related knowledge and skill is an important primary step toward preventing reading difficulties. Although not a panacea, this would serve to reduce considerable the magnitude of the problem currently facing schools. (p. 137)

Snow et al. (1998) further noted that children who encounter reading problems are those who have little exposure to reading prior to the primary grades. For example, they have poor speaking and listening skills, unfamiliarity with concepts of print, difficulty interpreting text, or they lack the ability to understand the alphabet principle and letter sound recognition. These same skills, generalized in later years to other content areas, are the foundation necessary to build upon for the remainder of their academic career. The final factor emphasized by Snow et al. (1998) is that children who struggle with reading and who rarely achieve reading success are those who typically live with parents who have poor reading skills, lack early literacy development, lack proficiency with the English language, and may experience hearing impairments.

In an attempt to understand the processes that students go through in attaining literacy skills, educators today use the term *emerging literacy* to describe the stages of literacy development (Rubin, 2002). These levels of literacy are the continuous development that young children experience as they become more involved in language and their attempts to master reading and writing (Rubin, 2002). According to Lane and Pullen (2004) children generally move through four stages as they learn to read. Typically found in the

early elementary aged students, kindergarten and first grade, the early emergent and upper emergent levels develop. Students in the first and second grade are typically at the early fluency level and students in the third grade and beyond have usually reached the fluency level. Lane and Pullen (2004) suggest that children at all four levels tend to surface in kindergarten through second grade classrooms, indicating the significance of implementing effective early reading instructions and providing early intervention for students who have difficulty learning to read.

Early emergent readers are children who are at the early stage of understanding how letters make sounds to form words. Starting with consonant-vowel-consonant patterns, emergent readers become familiar with the decoding system. At this point, students use it to help recognize high-frequency words and to blend letter sounds (Snow et al., 1998). Emergent readers are readers who use strategies to help them understand the alphabet principle, awareness of letter sound relationships and the connection they have with word pronunciation. Their knowledge of high frequency words have developed and the students are gaining a better understanding of comprehension strategies and word attack skills (Snow et al., 1998). At this stage, readers can also distinguish the difference between fiction and non-fiction text and comprehend their purpose for reading (Snow et al., 1998).

Snow et al., (1998) suggested that by the time these children reach the early fluent stage, they are independent in comprehending text, better able to understand story elements, and make connections with the text, becoming more familiar with genre type and writing styles. Fluent readers have successfully advanced from learning how to read and are now reading to learn. Characterized by fluent reading and varying the types of

text they read fluent readers are improving their reading skills and their ability to select reading materials for a specific purpose (Snow et al., 1998).

In summary, the process of learning to read and write begins early in a child's life. While many factors may affect early reading abilities, research suggests that those children who enter school without quality literacy experiences and exposure face the greatest risk.

**Students At-Risk of Reading Failure**

Wolfe and Nevills (2004) describe the brain as a hierarchy of low-level decoding skills and high-level comprehension-making skills. They wrote that,

> At the higher levels are the neural systems that process semantics (the meaning of language), syntax (organizing words into comprehensible sentences), and discourse (writing and speaking). Underlying these abilities are the lower-level phonological skills (decoding) dedicated to deciphering the reading code. All of these systems must function well in order for individuals to read quickly and make meaning from the text. (p. 26)

Most teachers can quickly assess which students are struggling readers without giving a formal assessment. Allington (2001) proposes that teachers need support in knowing how to address the multiple needs of students who are at risk of failure. Learning to read can be a difficult process for many children. While spoken language appears to be hard-wired inside the human brain, reading is an acquired skill that takes time to evolve and master (Moats & Tolman, 2009). For most students, reading is a process learned through direct instruction. Some children will fall behind, even though they are perfectly capable of learning, due to insufficient reading instruction.

Allington and Baker (2007) suggest that in order for reading instruction to be effective, it must contain three vital elements:

1. High quality reading instruction that occurs throughout the day and across the curriculum
2. Strategy lessons that include students the opportunity to apply in an independent practice
3. Additional support and intensive reading instruction beyond what the classroom teacher can provide (p. 90).

As we continue to fill classrooms with diverse learners, in culture, background knowledge, intelligence, and development of language, it is imperative that we effectively address all learning needs. While there is no single prescribed model for differentiated instruction, Lawrence-Brown (2004) indicates that differentiated instruction can make it possible for students with varying abilities to find success in the classroom. By identifying struggling readers early, we can provide differentiation through timely, intensive reading instruction.

In an article published in the journal, *Exceptional Children*, and authored by Vaughn, Linan-Thompson, and Hickman (2003), researchers made an attempt to hone in on how to prevent reading failure, and studied the effects of instruction that varied in length, intensity and duration. The researchers defined length as the number of minutes per session, intensity as the number of times per week, and duration as the number of weeks. Both research studies demonstrated high effect sizes for students at risk for reading failure when placed in small group interventions. A common finding from these two studies, as well as work conducted by Torgesen (2004), is that a small percentage of

students (5-7%) fail to make adequate progress even when provided with intensive and explicit supplemental instruction. It is reasonable to think that these students could have a reading/learning disability.

Research indicates that if children do not become successful readers by approximately the third grade, it is difficult to close the achievement gap between themselves and their peers in later years (Dorn, French, & Jones, 1998). According to Lyon (2003), the relationship between language and cognitive development plays an important part in a child's ability to become an efficient reader. Lyon believes that cognition and language become interdependent as a child develops and progresses. Lyon (2003) acknowledged, "If children don't receive the appropriate instruction, about 75% of the children entering first grade who are at-risk for reading failure will continue to have reading problems into adulthood." (p. 29) Dorn et al. (1998) have suggested that a model, which includes teachers providing clear demonstrations, engaging children, monitoring progress, and making accommodations, is critical in children developing a higher level of understanding. Since individual children make progress at different rates, it is critical to group and regroup them based on careful observation and assessment of how they are applying skills, knowledge, and strategies in their reading development (Dorn et al., 1998). Johnson (2006) recommends providing a framework that allows teachers to observe, analyze, plan, and take action for struggling students.

The National Reading Panel (NRP, 2000) Report reviewed scientifically based reading research to identify and define the most effective components of reading instruction for children. These components include phonemic awareness, phonics, vocabulary, fluency, and comprehension.

**Phonics and Phonemic Awareness**. Phonics and phonemic awareness go hand-in-hand. Farr, et al., (2005), clarify the relationship between the two as the ability to use sound-letter relationships to recognize words (phonics) and the ability to hear separate sounds in words (phonemic awareness). Students will use sound-letter relationships to become aware of and isolate specific sounds as well as begin visually discriminating letter shapes and words in daily print (Farr et al., 2005). The National Reading Panel (2000) identified phonemic awareness and letter knowledge as the two best school-entry predictors of how well children will learn to read during the first two years of instruction. Pressley et al. (2006) emphasized the relationship between early language exposure and a focus on phonemes as resulting in a well-developed vocabulary. In his research on phonemic awareness, Torgesen (2004) discovered the following information:

> Children who are delayed in the development of phonemic awareness have a very difficult time make sense out of phonics instruction: they certainly have little chance to notice the phonemic patterns in written words on their own. A simple way to say this is that for individual children, phonemic awareness us what makes phonics instruction meaningful. If a child has little awareness that even simple words like “cat” and “car” are composed of small chunks that are combined in different ways to make words, our alphabetic way of writing makes no sense. (p. 5)

Cooper et al., (2006) contributed to the research on phonemic awareness by offering the following explanation:

> Frequently, phonemic awareness is confused with phonics. They are not the same, though phonemic awareness is a precursor to using phonics. To become

> literate, a child must grasp the alphabetic principle, which means the sounds we hear in English words be represented by written symbols. Decoding, which is required for reading, involves looking at a print symbol and associating it with a sound. Encoding, which is required for writing, involves learning a sound and knowing what symbol, or letter(s) to write for that sound. Phonemic awareness is critical for both encoding and decoding. (p. 34)

The NRP's (2000) final report revealed that "phonemic awareness training produces the most benefits for young students" (p. 10). Overall, recent research indicates phonemic awareness instruction in the primary grades as a crucial component of beginning reading. However, phonemic awareness instructions not necessary in the intermediate grades, as most students have achieved the alphabetic principle at this point.

**Fluency.** The NRP (2000) defined fluent readers as those readers who are able to "read orally with speed, accuracy and proper expression" (p. 11). Fluency is considered one of the most important factors impacting a student in their overall comprehension. Research has suggested that when readers spend too much energy decoding text, fluency is impaired and the reader becomes frustrated.

Approximately 25 years ago, Allington (1983) wrote an article, "Fluency: The Neglected Goal." In the article, Allington discussed the issue of providing meaningful experiences for the reader characterized by fluent reading rather than reading word by word or in monotonous tones devoid of expression. He felt there was no way this experience could be profound or pleasurable for the reader.

In 2003, Shaywitz et al., provided knowledge in the area of brain imagery, yielding some noteworthy findings in regards to reading and fluency:

> Normal mature readers utilize three regions on the left side of the brain, the parietal-temporal region, occipital-temporal region, and Broca's region. Dyslexics, by contrast, often show impairments in these left-side regions. A slow speed in verbal processing can impair fluency for some readers. This process then impairs the speed of decoding, even though it is not rooted in phonological ability. (p. 214)

This evidence suggested that when a reader struggles in the area of fluency, there might be some other root causes in need of exploration.

Snow et al. (1998) stated, "Fluency should be promoted through practice with awide variety of well-written and engaging texts, at the child's own comfortable reading level" (p.14).

Hasbrouck (2005) gave the following tips on developing fluent readers:

To help develop students' fluency skills, teachers can use a variety of techniques, including modeling fluent reading by reading aloud to students, and at times by having students read aloud with them. This technique is most commonly known as choral reading. Students also benefit from opportunities to read aloud to their peers, especially when trained partners correct and encourage each other. Another powerful technique for improving students' reading fluency is to provide opportunities for repeated reading of text. Repeated reading is strongly supported by research as an effective strategy to develop fluency (p. 1).

Fischer (2008) believed there has been a greater emphasis in teaching oral reading fluency in the recent years. He suggested that the result of oral reading fluency is an increase in silent reading fluency, which ultimately leads to better comprehension.

Closely tied together are fluency and comprehension. Fluent readers are able to read text accurately and rapidly, recognize words automatically, and gain meaning from what they read. Farr et al. (2005), characterizes a fluent reader as sounding natural, as if they are speaking.

**Vocabulary**. Beck et al. (2008) defined vocabulary in terms of learning meaning of new words or words that a reader recognizes in print. In 1983, Chall distinguished between the two types of vocabulary that are necessary for reading attainment: word-recognition vocabulary and meaning vocabulary. Chall's (1983) definition of the two is as follows:

> Word-recognition vocabulary consists of the words that a student can pronounce when seen in print, whether by sight or by use of word attack skills. Meaning vocabulary consists of words that a student can attach appropriate meaning to, or define. Recognition vocabulary is print-bound, whereas meaning vocabulary is not; students have many words in their speaking vocabularies that they have never seen or attempted to read in print. (p.2)

Research has clearly specified the importance of vocabulary development to overall reading success. Vocabulary development affects a child's reading performance as well as the ability to make meaning for academic and social purposes. Vocabulary studies have indicated that an average child enters kindergarten with approximately 5,000 words in his/her meaning vocabulary; however, many enter with far fewer words, creating a disadvantage in reading success (Hart & Risley, 1995).

Many researchers attest that the process of learning words happens in stages or increments. Many agree on the following levels or word knowledge: (a) unknown, (b)

knowledge that the word exists, (c) partial knowledge, and (d) complete knowledge (Dale, 1965; Chall, 1983; Stahl, 1999). The overall goal of a comprehensive vocabulary program is to focus on expanding both receptive and expressive vocabulary. As an individual gains vocabulary skills by hearing words and understanding their meaning before they learn to read and write, vocabulary evolves from an individual's oral vocabulary.

While the use of root words, suffix clues and prefix clues all aid students in deciphering the meaning of words, it is more difficult to gain meaning from written text than oral language. In oral language, listeners are able to utilize clues such as tone, gestures, and the setting in which the communication is occurring to aid in comprehending the intended meaning. In written text, readers are required to build their own meaning from the words on the page and the context in which the written words lack the aid of auditory clues.

Also closely related are vocabulary and reading comprehension. Vocabulary has a direct effect on a student's ability to use context clues to aid in vocabulary development and therefore has a significant impact on reading comprehension (National Institute of Child Health and Human Development [NICHD], 2000). By developing skills in using context clues, teachers can have an impact on developing reading comprehension. The mature reader will rely on context clues more than any other word recognition skill (Farr et al., 2005).

**Comprehension**. Finally, comprehension is the culmination or the reason for reading (Farr et al., 2005). Students are not reading if they simply identify letters, sounds, and words, but do not understand what they are reading (Farr et al., 2005).

The NRP (2000) found that "Comprehension is critically important to the development of a child's reading skills and therefore the ability to obtain an education" (p. 13).

Pressley et al. (2006) has studied comprehension and its connection to reading. He discovered a progression of beliefs about teaching comprehension, beginning in the 1970's and early 1980's that included constructing mental representations of ideas and direct teaching of comprehension strategies in the mid 1980's and a balanced reading approach in the 1990's. In the next decades, Miller (2002) cited that active, thoughtful readers employ the following strategies: (a) activating prior knowledge before, during and after reading; (b) visualizing while reading; (c) making inferences and drawing conclusions; (d) making judgments and interpretations; (e) asking questions of themselves and the author; (f) determining the important ideas and themes; and (g) synthesizing what they read. The reader who is able to employ some or all of these reading strategies will increase their comprehension.

The NRP (2000) suggested that teaching a combination of comprehension strategies is the most effective approach; however, debate remains regarding the type of strategies that are most effective for certain age groups. Ongoing research in the area of comprehension instruction is necessary in order to understand how to acquire meaning from the written text, the true purpose for reading.

In conclusion, many factors affect the development of early reading abilities. Studies designate the case for early intervention as a solution. For those children entering school with language acquisition problems, the research indicates a greater risk of students having difficulty learning to read. To meet the needs of each learner we need to

invest in teacher preparation, understanding how the reading process develops and the quest for helping our students become proficient readers.

**Characteristic of Effective Reading Intervention**

Characteristics of an effective reading intervention include specific instruction, which assists at-risk readers achieve higher levels of reading proficiency and attain skills comparable to their grade level peers (Mathes, Denton, Fletcher, Anthony, Francis, & Schatschneider, 2005; Mathes & Toregesen, 1998). Typically, the intervention ceases once the reader has met the goal of the reading intervention program. Reconsidering goals not attained followed by intervention are the next steps.

Buffum, et al., (2012) advocate for aligning interventions to certain effective characteristics: (a) research-based, (b) directive, (c) administered by trained professionals, (d) targeted, (e) timely.

**Research based.** NCLB and IDEIA advocate the use of interventions that are research based in order to obtain reliable and valid knowledge relevant to educational activities and programs (Individuals with Disabilities Education Improvement Act [IDEIA], 2004). This has proven to be problematic as school districts search for the product or method that will address the needs of all struggling readers, not taking into account the student's individuality in development of skills and knowledge necessary to become a proficient reader. In addition, there are limited resources available to meet the needs of students in each grade level and content area. In an effort to remediate this problem, Buffum, et al., (2012) suggest looking at programs that can produce credible evidence that the intervention is working; in other words, look at the data collected

through assessments, progress monitoring, and anecdotal notes to determine the effectiveness of the intervention per student.

**Directive**. Mandatory intervention rather than invitational intervention provides a "no-excuse" approach. By offering opportunities for extended learning and assistance during the school day, students do not get the option to fail.

**Administered by Trained Professionals**. Reeve's research (2009) looked at students most at-risk for failure and shed light on the understanding that one of a school's most valuable resources is to have highly trained teachers. Reeves (2009) shared the analogy of sending a patient with cold symptoms to a brain surgeon and a patient with a brain tumor to an intern. By asking, "What does this student need and who is best trained to meet that need?" the school is ensuring that the most at-risk students will have access to the most highly effective teachers.

**Targeted.** Effective interventions targeted for a specific student, address specific skill deficits. By simply placing all students reading at the same level in an intervention group is not specific enough to remedy the problem. One student may struggle with fluency while another may need additional work in the area of phoneme awareness. The method for addressing these two deficits is vastly different and therefore requires a targeted approach for each deficit. Buffum et. al., (2012) recommends looking at why the student is not learning getting to the root cause of the problem, and then targets the cause of the problem. Many times educators look at the symptoms, failing grades, poor test scores, and poor attendance instead of getting to the core of the learning problem.

**Timely**. Educators are notorious for reacting to problems at the end of a quarter, semester or year instead of responding promptly when students do not learn. Buffum et.

al. (2009) suggests responding in a manner in which students can receive help or have their intervention modified in a timely manner, at least every three weeks. This provides educators the opportunity to share information with parents regarding the struggles their child is experiencing and the interventions put in place to assist them with their problems. A typical Tier 2 reading intervention program occurs outside the normal reading instruction time, focused on a specific reading skill, follows sequential instructional techniques, and includes students with common skill deficits (Mesmer & Griffith, 2006). Implemented daily or several times per week by a reading specialist or trained teacher, effective intervention takes place. In a review of literature on the prevention of reading failure, Mathes and Torgesen (1998) recommend the use of small groups along with scaffold instruction that focuses on the deficits of the group members being the most effective practice in producing positive outcomes. However, the most important conclusion to draw from recent intervention research is that intervention should focus on the same knowledge and skills taught in the regular classroom with additional focus on explicit and intensive instruction above what students receive in classroom instruction (McCardle & Chhabra, 2004). While researchers have determined the kind of explicit knowledge essential for students when developing reading skills, the exact mix of instructional activities that proves to be most effective differs depending on the unique needs of each child. In addition, educators must bear in mind that preventive and remedial instruction must be more intense than the regular classroom instruction in order to assist struggling readers in improving their reading skills at a faster rate than their typical achieving peers improve. This type of instruction is necessary in order to make

up the gaps in learning and skill students lacked when identified for interventions in the first place (McCardle & Chhabra, 2004).

In order to increase the intensity level of reading instruction and intervention at the elementary level educators need to keep two methods in mind: increasing instructional time or delivering instruction in a small group or individual setting. In a typical elementary classroom there are a large number of students receiving instruction, making it difficult for the teacher to meet the needs of each individual in a whole group instruction setting. By meeting with smaller groups based on skill deficits, the struggling reader will have additional learning opportunities, outside the whole group instruction, providing more occasions for learning for the at-risk student.

**Intervention by Design**. A Tier 2 supplement to a core-reading program, Literacy by Design, Intervention by Design was meant to help teachers implement intervention strategies (Opitz, 2008). Organized into primary (K-2) and intermediate (3-5) kits, Intervention by Design provides comprehensive instruction in the five pillars deemed essential for reading instruction by the National Reading Panel (2000). Teachers using the Intervention by Design Program have access to multiple tools that provide comprehensive instruction in phonemic awareness, phonics, vocabulary, comprehension and fluency. Formative assessment practices are an integral part of the Intervention by Design program, conducted to assess progress in reading achievement and inform future instructional decisions. Assessment allows the teacher to group students by specific skill deficit, resulting in a myriad of group sizes and compositions. Teaching cards for each of the five pillars of literacy provide teachers with access to frequent, targeted interventions, explicit instruction to guide learners, scaffolding, modeling, multiple exposures to text,

and learning activities to engage students in the learning process. The teaching cards contain prompts, to implement with recommended fiction and non-fiction leveled texts, for teachers to use when monitoring students understanding of key skills. The leveled readers and teaching cards allow teachers the flexibility to create a set of lessons, targeting specific skills. In addition, the Intervention by Design program provides suggestions for creating predictable instructional routines, which aid in facilitating learning for all students. With a predictable pace and lesson structure, students can develop a comfort in the lesson routine as they build confidence in themselves and their reading ability.

Ongoing informal assessments provide the necessary information for teachers to revisit and improve intervention instruction. Such ongoing assessments provide feedback to teacher and student and serve as a means to an end, improving instruction and achievement.

**Assessment**

The role of student achievement has shifted greatly in the United States (Darling-Hammond & Wise, 1985). In the years past, before state-mandated criterion referenced tests existed, most school districts administered only nationally normed achievement tests that had been designed to compare the student population in a district with students throughout the nation. The focus is now on tracking the progress of students throughout the assessment process, not merely after completion of the assessment. The Response To Intervention model emphasized high-quality instruction and intervention as well as regular progress monitoring at each tier (Richards et al., 2007). In accordance with RTI parameters, many schools and districts have already identified an assessment tool or

universal screening tool, used to identify specific skill deficits for each student. Some assessment tools serve the purpose of screening, instructional planning, and progress monitoring. Teachers also have an arsenal of observation forms and checklists that help determine which skills students are able to generalize and apply outside of a small-group setting. According to the National Center on Student Progress Monitoring (NCSPM, 2007), progress monitoring is a procedure that allows educators to continually receive feedback on their instructional strategies and how they affect student achievement. Progress monitoring, which is widely used in schools today, assesses the whole class, particular groups or sub-groups as well as individuals. NCSPM (2007) indicated that in an educational system assessment is a necessary element. However, there is some disagreement on what that assessment should look like, especially when considering the early reader. Assessment tools that go beyond tests of single skills are most optimal for meeting RTI goals (Walker-Dalhouse et al., 2009).

Allington (2005) encourages teachers to listen to our younger students read rather than relying on digital screening and monitoring tools for assessment. "Listening to students read gives teachers the opportunity to see first-hand what skills and strategies students are employing at different stages" (Allington, 2005).

Teachers can use the results of such assessments to plan instruction, according to the identified needs of the students. Authentic assessment practices hold the potential for changing how teachers teach and how children develop as readers.

**Formative assessment**. The National Reading Panel (2000) has identified the need for ongoing evaluation to determine whether teaching strategies are working. They also recognize the need for teachers to determine the next steps in instruction as well as

provide feedback to students so they may monitor their own learning. Formative assessments provide the ongoing monitoring necessary to inform instructional practices. In a quality balanced literacy program, teachers use formative assessment such as observation and assessment to identify students' understanding and to inform instruction. The running record is a formative assessment tool, developed by Clay (2002), to help teachers observe reading behaviors systematically. Fountas and Pinnell (1996) have characterized the running record as a quick, practical, highly effective tool that becomes an integral part of teaching the student and sharpening the tools of the practitioner. Depending on the purpose the assessment serves and whether or not the text is new or previously read by the student, the teacher may use a running record. In the case of a below level reader, running records may be taken as part of a daily practice, in which students read from a text that is familiar. Fountas and Pinnell (2006) outline six levels of analysis that provide information when analyzing a running record:

**Accuracy**. The accuracy rate gives the assessor information about the ability of the reader to word solve and access the text they are reading. Accuracy does not guarantee comprehension, but is a good starting point. The following formula determines accuracy:

$$\frac{100-E}{RW} \times \frac{100}{1} = \text{Accuracy ratio}$$ (E= Errors, RW= Running Words or Words Read)

(Fountas & Pinnell, 2006, p. 47).

**Self-Correction**. Self-correction refers to the reader's ability to monitor his own reading, which is an especially important skill for the young reader. Students who do not show strong self-correction skills often need assistance from the teacher with reading

text. As students develop as readers, self-correction can become innate and undetectable to the observer. The ratio for self-correction ratio is:

SC = SC (SC= Self Correction, E=Errors)

E

A ration close to one indicates better processing (Fountas & Pinnell, 2006, p. 54).

**Sources of Information Used and Neglected**. After analyzing a running record, the teacher will look at sources of information that the student accessed during reading, including meaning, structure, or visual information. This information will help the teacher guide both group and individual teaching.

**Strategic Actions.** The actions that a reader engages in while reading can give insight into how the reader is processing information. By looking at the strategic actions the reader is using, the teacher can see first-hand how the reader uses sources of information or self-correction.

**Fluency and Phrasing**. By sampling the oral reading behavior of the reader, the teacher can see the reader's ability to read fluently, provided the text is on an appropriate level and not too difficult for the reader. This is an opportunity for the reader to demonstrate not only fluency, but also a personal voice in reading through his expression and voice when interpreting what was read.

**Comprehension**. Comprehension of text is the ultimate goal for a young reader. After the reading of text, through conversation about the text the student read, the teacher detects comprehension. This behavior may also be observed as the teacher completes the running record by the student's ability to make meaning throughout the reading and engaging in strategic actions.

Fountas and Pinnell (2006) suggest the importance of using a running record to observe reading behaviors is more preferred than simply asking comprehension questions after a reading, especially for younger children. The researchers also developed a leveled reading system with specific characteristics at each level. Appendix A displays each reading level and the characteristic behavior of readers at that level. Clay (2002) recommends having a conversation with a child about the story after the completed running record to add to the teacher's understanding of the reading. She proposes using open-ended questions with students, make sure to choose direct questions if concerned that the reader may have missed something important.

While increasing the achievement level of the reader is the goal, educators cannot simply assume that teachers are prepared to deliver such intervention. Professional development in reading instruction should be at the core of our intervention preparation.

**Summary**

Providing early interventions for struggling readers can help prevent reading difficulties for students. This review of literature referred to multiple studies indicating the importance of reading as both student and adult. Illiteracy makes a significant impact on our society, both economically and socially. Lyon (2003) attests the challenge remains in closing the gap between knowing about how to teach reading and actually teaching reading. Furthermore, Lyon suggested that effective instruction would allow educators to implement differentiated instruction practices based on student need. Without such differentiated practices, in the form of systematic intervention practices, Lyon attested that students would continue to have reading difficulties.

Studies suggest a decrease in the referrals of students who qualify for special education services with effective implementation of RTI (Fuchs, Mock, Morgan, & Young, 2003; O'Conner, 2007). The effective implementation of the RTI model will require educators to shift their thinking in how to best identify and meet the needs of all students. Early identification and intervention is key in providing a firm foundation of reading instruction.

In the review of literature relating to this study, the researcher emphasized the importance of reading as a skill that must be taught. Through this review of literature, the researcher implied that good readers have a firm understanding of the five pillars of literacy: (a) Phonics- the ability to use sound-letter relationships to recognize words; (b) Phonemic Awareness- the ability to hear separate sound sin words; (c) Vocabulary- the ability to use context clues to determine meaning; (d) Fluency- the ability to read text accurately and rapidly, recognizing words automatically and gaining meaning from what is read; (e) Comprehension- the ability to draw meaning or understanding from what is read. Reading difficulties could occur if students experience problems in any of these areas.

Routman (2003) suggests that teachers should, "teach with a sense of urgency; not prompted by anxiety but rather making every moment in the classroom count, ensuring that instruction engages students and moves them ahead, and uses daily evaluation and reflection to make wise teaching decisions." In this review of literature, the researcher has shed light on research that emphasizes training and developing teachers through job-embedded professional development that is essential for improving student achievement.

The No Child Left Behind Act of 2001 has affected schools around the country.

The federal government has asked schools to report their success in terms of what each student achieves, and to use the knowledge gained from assessments "to craft lessons to make sure each student meets or exceeds the standards" (USDE, 2003, p. 2). In an effort to support such changes, Tomlinson (1999) challenges schools and district-level personnel to assist teachers in developing an understanding of reading instruction, and to introduce, encourage, and nurture teachers throughout the process.

Modified instruction to meet students' needs and regular assessment of students has been a focus of the research showing increased student achievement. The significant impact of assessment information to drive instruction yields significant positive effects on learning as it enables educators to focus instruction for intervention on students' targeted needs.

Chapter 3 provides an outline of the effects of a Tier 2 reading intervention program, Intervention by Design, on student achievement in reading. Approached as a mixed methods design, the researcher will present a quantitative and qualitative analysis of factors found to be relevant to student achievement in reading.

# Chapter Three: Method of Addressing the Problem

## Introduction

The Caring Elementary School is a large suburban school located in Missouri. The researched school serves a K-5 total population of approximately 900 students. The demographics of the school include 93% White, 3% Black, 2% Asian, and 2% other. Low-income students, based on free-and reduced-lunch status, comprise 13.5% of the total student body. Students receiving special education services comprise 15% of the school population. The average class size for the researched grade levels in second grade is 23 students and the average class size in third grade is 24 students. The Caring Elementary School has enjoyed of history of strong academic achievement in the area of reading and has seen respectable gains on the Missouri Achievement Program (MAP) over the past five years. However, the school has recently experienced an increasing number of students entering school struggling with early literacy concepts and skills.

Reading achievement is a critical component for successful school performance and transition into life beyond the four walls of the schoolhouse. Researchers remind us those children who do not attain success in reading by the third grade find it difficult to catch up and achieve with their peers (Dorn, French, & Jones, 1998). As students transition into intermediate grades, the increased attention to subject matter and challenging vocabulary make high quality reading instruction in the primary years a necessity. Researchers have made direct correlation between overcoming personal and social adversity and the ability to read (Simmons & Kameenui, 1998); however, this cannot be the only factor taken into account in devising a plan to reach the struggling reader. Educators must shed light on the need to educate teachers in identified best

practices for reaching struggling readers. According to Buffum et al. (2009), educators need to embrace change, assess current practices, identify struggling students, and brainstorm possible resources before attempting to evaluate the effectiveness of the interventions as implemented. Furthermore, Buffum et al. (2009) suggests that a celebration of a culture of change and reflection enables staff to embrace meaningful professional development.

The building administration as well as second and third grade teachers of the Caring Elementary School discovered that some students entered second and third grade with lagging skills in the area of reading and needed additional support. At the end of first grade, teachers reviewed fourth quarter report card data and identified 30 students not meeting grade level expectancy or struggling with specific reading skills and in need of reading intervention. Teachers identified these students by reviewing anecdotal notes and running records. As students read aloud, the teacher took specific notes on student fluency, phonics and phonemic awareness skills. Through post reading conversation, teachers gain understanding of a student's comprehension skills and vocabulary attainment. By reviewing these behaviors and looking at characteristics of readers at various levels, teachers used the Fountas and Pinnell (2001) Text Level Description (Appendix D) to help determine if students were reading on grade level or if they were struggling with particular skills. The Fountas and Pinnell (2001) Text Level Description provided teachers with characteristics of students as readers and writers at various text levels (Fountas & Pinnell, 2001). If the teacher detected concerns with the student's progress in reading the teacher would intervene with the student. When reporting progress to parents, teachers also used the Fountas and Pinnell (2001) Text Level

Gradient (Appendix E) to determine the correlation between reading level and appropriate grade level and communicated progress on the Friendly School District's Report Card as Above (A), Meeting (M), or Not Met (NM).

As a possible solution to the problem, the Caring Elementary School pursued a specific intervention tool, Rigby Intervention By Design, to supplement the core reading instruction provided through the Rigby Literacy By Design Program. At the start of the 2009-2010 school year, teacher's implemented 30 minutes of daily intervention time for all second and third grade students who were reading below grade level and who were struggling with specific reading skills, in addition to the 90 minute daily literacy block delivered to all students. Rigby Intervention By Design offered teachers a framework for providing specific reading intervention in the areas of phonics, phonemic awareness, vocabulary, comprehension, and fluency.

**Background**

The researcher in this case study investigated whether the implementation of a reading intervention program, Rigby Intervention by Design, was successful in helping second and third grade students identified as below level readers or students struggling with specific reading skills to make significant progress in reading achievement and maintain this progress. In measuring success, the researcher analyzed fourth quarter reading achievement reported on the Friendly School District's report card at the end of the 2008-2009, 2009-2010, and 2010-2011 academic years, teacher perception of the intervention program, and level of program implementation as observed by the researcher.

**Program Description**

Professional development in using the Rigby Intervention by Design program was necessary to provide teachers an understanding of the program components. Prior to the professional development, teachers in the Caring Elementary School received the materials and had the opportunity to browse through the intervention cards provided as a component of the Rigby Intervention By Design program. Professional development, conducted by a consultant from the Rigby Company, the publishers of the Literacy By Design and Intervention By Design program, included a workshop approach with teachers gathering information, setting up class rosters, and determining intervention groups based on end of first grade report card data indicating not meeting grade level expectations.

The next step for teachers included working with small reading intervention groups, three times per week, using the intervention cards as their guide. The intervention cards were focused on the five pillars of reading; phonics, phonemic awareness, comprehension, vocabulary and fluency. Teachers were able to focus on specific skill deficits within the intervention group. Building administrators and district content leaders emphasized the need to execute the program with fidelity during the first year of implementation. Approximately six weeks later, teachers met for a day with the Rigby Professional Development Consultant and discussed implementation, including any specific questions and concerns. At that time, teachers and the Rigby Professional Development Consultant discussed how to move students into other intervention groups based on other skills deficits or how to have students apply skills with more difficult text levels. Teachers provided another six-week intervention and made the necessary

recommendations for future student intervention as needed. After this point, the Rigby Professional Development Consultant met with the teachers as needed during the weekly plan time. Specific program details regarding the Rigby Intervention by Design Program can be found in the review of literature in Chapter 2.

**Purpose of Study**

This case study had two purposes. The first purpose was to evaluate the achievement outcomes of a reading intervention program, Rigby Intervention by Design, when implemented with second and third grade students reading below level for the current grade placement or students struggling with specific reading skills at the end of each academic year, as measured by the Friendly School District's report card. Systematic instruction provided by teachers focused on the five pillars of literacy. These components consisted of (a) phonics: the ability to use sound-letter relationships to recognize words; (b) phonemic awareness: the ability to hear separate sounds in words; (c) comprehension: understanding what is being read; (d) vocabulary development: developing skill in using context clues; and (e) fluency: the ability to read text accurately and rapidly, recognizing words automatically and gaining meaning from what they read. The reading intervention program, Rigby Intervention by Design, is a program used in the Friendly School District to intervene with students who are reading below grade level as determined with formative assessments and reported using the Friendly School District's report card. The intent of the Rigby Intervention by Design program is to provide instruction in the five pillars of literacy and equip struggling readers with the opportunity to obtain skills needed for automatic access to printed materials (Opitz, 2008).

The second purpose of this project was to evaluate the perceptions of the teachers in regards to the reading intervention program, Rigby Intervention by Design, and how those perceptions guided implementation and instructional practices in the classroom. In measuring success of the reading intervention program, the focus was on reading achievement, teacher perception of the intervention program, and program implementation.

By examining school dropout, unemployment, federal public assistance, and prison rates, it is evident that those who lack proficient reading skills are indicative of those who are unsuccessful in today's society. Stanovich (2000) characterized the importance of successful early literacy skills in developing good readers for life, carrying over into the work force and employment opportunities. While much research conducted on reading instruction, including numerous panels and committees, points to educators facing greater accountability for results than ever, the challenge of applying knowledge and practice to the classroom continues. Snow, Griffin, and Burns (2005) compared the gap in teacher education and the achievement gap among students:

> The achievement gap between the rich and poor, the privileged and marginalized, the advantaged and disadvantaged in our society is still extremely wide. If for no other reason than getting serious about narrowing that gap,…we must take seriously our own learning…and make it as high a priority as eliminating the achievement gap that robs so many students of the opportunity they are entitled to. We cannot, we believe eliminate the achievement gap in our schools without closing the knowledge gap in our profession. (p. 233)

By providing explicit instruction in the five pillars of reading instruction, students should be equipped with the strategies to tackle a wide range of texts successfully.

Caring Elementary School has functioned under the core understandings of the Professional Learning Communities model and has worked collaboratively to focus on results (DuFour & Eaker, 1998). The researched school supports the premise that professional development must go hand in hand with a results orientation focus in order to be effective. Sparks and Hirsch (1997) outlined the need for results-driven education for students and results-driven staff development for educators. Furthermore, Sparks and Hirsch (1997) credited altered instructional behavior as the true mark of successful staff development. According to DuFour and Eaker (1998) promoting shared vision and values, fostering collective inquiry, promoting collaboration, and focusing on results enables school districts to engage in the difficult work of improving schools.

Job-embedded learning in instructional strategies and data analysis is critical in understanding where to embark in providing targeted interventions for below level readers. In agreement with DuFour and Eaker (1998), job-embedded professional development with opportunities such as book studies, vertical teaming, and other site-based measures are critical.

**Hypotheses/Research Questions**

The hypotheses identified by this researcher are based on the research of Dorn et al. (1998) which indicates that if children do not become successful readers by the end of third grade, it is difficult for them to catch up with their same-age peers. The hypotheses of this case study include the following:

$H_1$) Students at the end of first grade who are reading below grade level or struggling with specific reading skills will make adequate progress to read at or above grade level by the end of the second grade year as a result of receiving intervention using the Rigby Intervention by Design Program as measured by the Friendly School District's report card data.

$H_0$) Students at the end of first grade who are reading below grade level or struggling with specific reading skills will not make adequate progress to read at or above grade level by the end of the second grade year as a result of receiving intervention using the Rigby Intervention by Design Program as measured by the Friendly School District's report card data.

$H_2$) Students who recovered at or above grade level status by the end of the second grade academic year will maintain at or above grade level status by the end of third grade as measured by the Friendly School District's report card data.

$H_0$) Students who recovered at or above grade level status by the end of the second grade academic year will not maintain at or above grade level status by the end of third grade as measured by the Friendly School District's report card data.

Data presented in Chapter 4 discusses each of the hypotheses and the study results. The research questions of this project include the following:

1) In what ways will teachers' beliefs and perceptions about the Rigby Intervention by Design Program affect the achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?

2) In what ways will teacher's implementation of the Rigby Intervention by Design program affect achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?

**Sample Selection**

The Caring Elementary School is a large suburban school located in Missouri. The researched school serves a K-5 total population of approximately 900 students.

This case study compared the analyzed reading achievement scores obtained from students at the end of first, second and third grade and reported on the Friendly School District's Report Card. Within that population, informal assessment results identified students reading below grade level or students struggling with specific reading skills as identified through the Friendly School District's report card. Progress was reported on the Friendly School District's report card as A-Above, M- Meeting, or NM- Not Meeting grade level expectancy. Teachers identified 30 students at the end of first, second, and third grade as needing intervention, using end of the year report card data.

The following table presents a demographic representation of the thirty students receiving reading intervention.

Table 1

*Students Receiving Reading Intervention-Demographic Information*

| Student | Male/Female | Free/Reduced Lunch | Ethnicity (W=White, AA= African American, O=Other) |
|---|---|---|---|
| Student #1 | Female | No | W |
| Student #2 | Male | Yes | W |
| Student #3 | Female | Yes | W |
| Student #4 | Male | No | W |
| Student #5 | Female | Yes | AA |
| Student #6 | Female | Yes | W |
| Student #7 | Male | Yes | W |
| Student #8 | Female | Yes | W |
| Student #9 | Male | Yes | W |
| Student #10 | Male | No | W |
| Student #11 | Male | No | W |
| Student #12 | Female | No | AA |
| Student #13 | Female | Yes | AA |
| Student #14 | Female | Yes | W |
| Student #15 | Female | Yes | W |
| Student #16 | Female | Yes | W |
| Student #17 | Female | Yes | W |
| Student #18 | Male | Yes | O |
| Student #19 | Female | Yes | W |
| Student #20 | Female | Yes | W |
| Student #21 | Male | Yes | W |
| Student #22 | Male | Yes | W |
| Student #23 | Female | Yes | W |
| Student #24 | Male | Yes | AA |
| Student #25 | Male | Yes | W |
| Student #26 | Male | No | W |
| Student #27 | Male | Yes | W |
| Student #28 | Male | Yes | W |
| Student #29 | Male | Yes | W |
| Student #30 | Male | Yes | AA |

The researcher noted a nearly equal percentage of males and females receiving reading intervention. The researcher noticed larger discrepancies in the percentage of White students receiving reading intervention (80%) as opposed to African Americans (17%) and Other ethnic subgroups (3%). Students receiving free/reduced lunch represented 23% of the total population of students receiving reading intervention. The overall population of the Caring Elementary School is characterized by 92% White students, 4% African American students, and 4% other ethnic groups. Students receiving free/reduced lunch at the Caring Elementary School represent 13.5% of the total student population. Further comparison indicates a lower percentage of White students participating in the intervention and a higher percentage of Africa Americans, other ethnic subgroups and students on free/reduced lunch.

Teachers used formative assessments such as running records and teacher observation to assess progress in reading, hence creating a case study based on a sample of convenience. As a result, teachers identified some students as below level readers while others characterized as having a specific skill deficit.

**Qualitative Data Gathering Instruments**

The researcher presented both qualitative and quantitative research methodologies in this case study. A triangulation of data will be presented and interpreted in Chapter 5.

**Content Knowledge Survey.** The researcher used two different tools to measure the qualitative aspects of the case study. The first tool the researcher used was a Content Knowledge Survey (see Appendix C). A survey facilitator distributed 15 surveys to all second and third grade teachers, special education teachers, and literacy coaches in the researched school. Of the 15 surveys, 10 returned, resulting in a response rate of 67%.

The researcher conducted an electronic survey, via a survey facilitator, with 10 participating teachers who delivered intervention to students using the Rigby Intervention by Design program. The Content Knowledge Survey included 13 statements responded on a Likert scale using the following: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD), and No Response (NR). The survey focused on content and instructional themes the teachers encountered through their experience in implementing the Rigby Intervention by Design program. The electronic distributions of the survey, conducted through an appointed facilitator, used Survey Monkey, an online survey tool that allowed the researcher to design a survey, collect responses, and analyze the data obtained. The researcher focused on themes in the content knowledge survey that contain information regarding how the impact of prior literacy knowledge and implementation of a balanced approach to literacy skills effected perceptions and beliefs regarding the Rigby Intervention by Design Program.

The researcher further analyzed the Content Knowledge Survey and examined the responses by each participant disaggregated by grade level. Summary and discussion of these responses takes place in Chapter 4, including the responses of all teacher participants, second grade teacher participants, and third grade teacher participants and the percentage of positive responses indicated as Strongly Agree (SA) or Agree (A).

**Level of Implementation**. The researcher also conducted literacy intervention walkthroughs, of about five to seven minutes each, using the Reading Intervention Checklist (Appendix B) for analyzing levels of implementation of a balanced approach to literacy instruction using the Rigby Intervention by Design Program. Results of the walkthrough observations, a common practice by the researcher, provided specific

information about levels of implementation of the Rigby Intervention by Design Program. The researcher observed each of the teacher participants during the literacy intervention block three times throughout a semester. During the literacy walkthrough, the researcher conducted a brief observation to obtain information focused on the following areas of implementation: skills, pacing, and fidelity and student engagement. The researcher compared the skill, pacing, and fidelity with that recommended by the Rigby Intervention By Design Program. The researcher used numeric indicators representing high level of implementation (2), inconsistent level of implementation (1), and low level of implementation (0). Specific skill analysis included the five pillars of literacy: comprehension, fluency, phonemic awareness, phonics, and vocabulary. The researcher provided skill and implementation codes for each classroom visit and a copy of the literacy walkthrough to each participant. The researcher compiled the results of literacy intervention walkthroughs to allow for implementation analysis.

**Data Analysis**

Using report card progress levels collected at the end of the fourth quarter from 2008-2011, the researcher conducted a quantitative comparison to see if students who received reading intervention, using the Rigby Intervention by Design Program, made significant progress as measured by the Friendly School District's report card. The report card communicates quarterly achievement to parents. Teachers reported progress as Above (A) or Meeting (M) or Not Meeting (NM) grade level expectancy and communicated on the Friendly School District's report card. During this case study, teachers manually filled out report cards for each of the four quarters. The researcher analyzed data for 30 students who attended the Caring Elementary School and received

intensive interventions through the Rigby Intervention by Design program during the 2009-2010 and 2010-2011 school years obtained from the report card at the end of the fourth quarter. Specifically, the researcher analyzed progress made for students reported as Not Meeting (NM) grade level expectancy at the end of their first grade year and their progress by the end of their second grade year. Additionally, the researcher analyzed the progress made for students reported as Above (A) or Meeting (M) grade level expectancy at the end of their second grade year and the ability to maintain that status by the end of their third grade year. Chapter 4 includes more detailed quantitative data analysis.

In the qualitative portion of this case study the researcher analyzed beliefs and perceptions expressed by second and third grade teachers, literacy coaches, special education teachers, and reading teachers in the Caring Elementary School. Each participating teacher received an electronic content knowledge survey, which included 13 statements for teachers to rate their responses using a Likert rating scale. The survey allowed teachers to reflect their beliefs and perceptions about the Rigby Intervention by Design program and its effects on students reading below grade level. The survey, conducted through Survey Monkey and sent out through a project facilitator, allowed the researcher to design a survey, collect responses and analyze results. The researcher looked for themes or trends in responses based on the Content Knowledge Survey, sorted answer choices, and ultimately provided a summary of the results. The researcher spotlighted themes in the content knowledge survey that contained information regarding how the impact of prior literacy knowledge and implementation of a balanced approach to literacy instruction affected perceptions and beliefs regarding the Rigby Intervention by Design program.

The researcher also conducted literacy intervention walkthroughs, of about five to seven minutes each, using the Reading Intervention Checklist for analyzing levels of implementation of a balanced approach to literacy instruction using the Rigby Intervention by Design program. Walkthrough observations are a common practice by the researcher to get a representation of instruction and engagement in classrooms and provided teachers feedback on observations made during that period (Fraenkel & Wallen, 2008). Observations conducted included each of the teacher participants during the literacy intervention block three times throughout a semester. During the literacy walkthrough, the researcher conducted a brief observation to obtain information focused on the following areas of implementation: skills, pacing, and fidelity and student engagement. Specific skill analysis included comprehension, fluency, phonemic awareness, phonics, and vocabulary. Each participant received skill and implementation codes provided for each classroom visit and a copy of the literacy walkthrough feedback. The researcher used results of literacy intervention walkthroughs, focused on program implementation, for analysis.

**Summary**

The methodology of this case study leads to a careful investigation of a reading intervention program, Rigby Intervention by Design, used with struggling readers. The researcher used both qualitative and quantitative methods in this case study.

Assessment data including report card levels at the end of first, second, and third grade will be included in Chapter 4. The researcher also gives further attention to students during their second year of intervention and the ability to maintain or increase

their reading achievement levels. The quantitative results of the study will be presented in Chapter 4.

Also discussed in Chapter 4, the researcher performed a qualitative analysis through a Content Knowledge Survey and results of literacy intervention walkthrough looking at level of program implementation. The first research question was, "In what ways will teachers' beliefs and perceptions about the Rigby Intervention by Design Program effect the achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?" The researcher intended the Content Knowledge Survey given to teacher participants to demonstrate how teachers felt about reading instruction and intervention, specifically using the Rigby Intervention by Design program.

The second research question was, "In what ways will teacher's implementation of the Rigby Intervention by Design program affect achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?" The researcher intended the literacy walkthroughs focused on program implementation to demonstrate high, inconsistent, and low levels of implementation in regards to the Rigby Intervention By Design Program.

The results of this case study appear in Chapter 4.

# Chapter Four: Results

## Introduction

The researcher in this case study investigated whether the implementation of a reading intervention program, Rigby Intervention by Design, proved to be successful in helping second and third grade students identified as below level readers or struggled with specific reading skills and received increasing levels of intervention in reading, make significant progress in reading achievement by attaining a meets grade level expectancy or above grade level expectancy as implicated on the Friendly School District's report card. In analyzing the overall success of the reading intervention program, the focus was on reading achievement reported on the Friendly School District's report card, teacher perception of the intervention program, and program implementation.

This case study had two purposes. The first purpose was to evaluate the achievement outcomes of a reading intervention program, Rigby Intervention by Design, when implemented with a total of 30 second and third grade students reading below level for the current grade placement or students struggling with specific reading skills as measured by the Friendly School District's report card. Systematic reading intervention provided by teachers focused on the five pillars of literacy. The reading intervention program, Rigby Intervention by Design, was used in the Friendly School District to intervene with students who were reading below grade level as determined using formative assessments and reported using the Friendly School District's report card. Rigby Intervention by Design provided strategies for teacher to provide instruction in the

five pillars of literacy. The desired outcome for struggling readers included the ability to obtain skills needed for access to printed texts.

The second purpose of this project evaluated the perceptions of the teachers in regards to the reading intervention program, Rigby Intervention by Design, and how those perceptions guided implementation and instructional practices in the classroom. A survey was used to measure teacher perception of the intervention program and program implementation through a literacy walkthrough checklist (Appendix B).

Below level readers were students in second and third grade identified through various informal assessments such as running records and anecdotal notes as having weak reading skills. These students need extra help to become good readers and were given additional learning opportunities through small group reading instruction focused on specific skill deficits, as implemented through the Rigby Literacy by Design. Explicit, systematic intervention provided by teachers focused on the five pillars of literacy instruction. This was a qualitative and quantitative case study designed to provide answers for the following research questions:

1. In what ways will teachers' beliefs and perceptions about the Rigby Intervention by Design Program affect the achievement of students who are reading below grade level?
2. In what ways will teacher's implementation of the Rigby Intervention by Design program affect achievement of students who are reading below grade level?

Null Hypotheses addressed were:

$H_0$) Students at the end of first grade who are reading below grade level or struggling with specific reading skills will not make adequate progress to read at or above

grade level by the end of the second grade year as a result of receiving intervention using the Rigby Intervention by Design Program as measured by the Friendly School District's report card data.

$H_0$) Students who recovered at or above grade level status by the end of the second grade academic year will not maintain at or above grade level status by the end of third grade as measured by the Friendly School District's report card data.

**Description of Sample**

The Caring Elementary School is a large suburban school located in St. Charles County, Missouri. The researched school serves a K-5 total population of approximately 900 students. The demographics of the school include 93% White, 3% Black, 2% Asian, and 2% other. Low-income students, based on free-and reduced-lunch status, comprise of 13.5% of the total student body. Students receiving special education services comprise of 15% of the school population. The average class size for the researched grade levels in first and second grade is 23 students and the average class size in third grade is 24 students.

The analyzed reading achievement scores obtained from first, second, and third grade students account for approximately 300 of the students within the school population. Teachers used informal assessments such as running records and anecdotal notes to identify 30 first, second, and third grade students in need of intervention. As a result, teachers identified students as below level readers while others not identified as below level readers demonstrated specific reading skill deficits using the Fountas and Pinnell Text Level Descriptions, 2001, (Appendix D) and the Fountas and Pinnell Text Level Gradient, 2001(Appendix E). Teachers then reported student progress using the

Friendly School District's report card, to account for students A- Above, M-Meeting, or NM- Not Meeting grade level expectancy from the fourth quarter of each academic year.

**Quantitative Data Analysis**

Using report card progress levels collected from fourth quarter in 2008-2011, a comparison focused on students who received reading intervention, using the Rigby Intervention By Design Program, and their ability to make significant progress as measured by the Friendly School District's report card. Teachers reported progress as Above (A) or Meeting (M) or Not Meeting (NM) grade level expectancy and communicated on the Friendly School District's report card. Analysis of report card data for 30 students who attended the Caring Elementary School and received intensive interventions through the Rigby Intervention by Design program during the 2009-2010 and 2010-2011 school years reported if significant reading achievement had been made.

Table 2 reports percentages of the 30 students receiving intervention using the Rigby Intervention by Design program, in the Above (A), Meets (M), and Not Meeting (NM) categories as reported on the Friendly School District's report card. The data shown represents the 30 students at the end of first, second, and third grade during the 2008-2009 through the 2010-2011 school years. Percentages include the year before implementation of Rigby Intervention by Design (2008-2009). Additionally, percentages represent the year that implementation of the Rigby Intervention by Design program occurred (2009-2010) and for the year immediately following the initial implementation of Rigby Intervention by Design (2010-2011).

Table 2

*Categorical Progress as Reported on the Friendly School District's report card for students receiving reading intervention*

| Data Collection Years | Above expectations | Meets expectations | Not meeting |
|---|---|---|---|
| 08-09 school year (end of first grade) | 0% | 80% | 20% |
| 09-10 school year (end of second grade) | 3.3% | 76.6% | 20% |
| 10-11 school year (end of third grade) | 3.3% | 63.3% | 33.3% |

Null hypothesis1. Students at the end of first grade who are reading below grade level or struggling with specific reading skills will not make adequate progress to read at or above grade level by the end of the second grade year as a result of receiving intervention using the Rigby Intervention by Design Program as measured by the Friendly School District's report card data.

In comparing categorical report card data, a *Z* test for difference in proportions would determine whether the two population percentages are different. In this case study 20% of students were reading below grade level at the end of first grade, at the end of the 2008-2009 school year, and 20% of students continued to read below grade level at the end of second grade, at the end of the 2009-2010 school year. In this case, there is no observable difference in proportion when comparing students reading below grade level at the end of first grade and at the end of second grade, hence no statistically significant difference (Critical value = ±1.96; z-test value = 0). These results cause a failure to reject the null hypothesis.

Null hypothesis 2. Students who recovered at or above grade level status by the end of the second grade academic year will not maintain at or above grade level status by the end of third grade as measured by the Friendly School District's report card data.

In comparing categorical report card data, a *Z*- test for difference in proportion represented statistical value for students who were at or above grade level status by the end of the second grade academic year in comparison to students at the end of the third grade. At the end of the 2009-2010 school year, 79.9% of students receiving reading intervention were above or meeting grade level expectations, as reported on the Friendly School District's report card; during the 2010-2011 school year 66.6% of students receiving reading intervention were above or meeting grade level expectancy as reported on the Friendly School District's report card. There was no significant increase in the number of students maintaining at or above grade level expectancy (critical value = ±1.96; z-test value = -1.16). These results cause a failure to reject the null hypothesis.

The collective analysis of the Friendly School District's report card data, using Z test for difference in proportion to represent statistical values, did not yield statistically significant improvement in reading progress when receiving reading intervention using the Rigby Intervention by Design Program. There were no significant increases in achievement levels, during the program implementation year, when analysis was completed using end of first grade and end of second grade report card data.

Further, no significant increases in end of second grade or end of third grade achievement levels, during the second year of implementation, were noted. Again, the collective analysis of the Friendly School District's report card data, using Z test for difference in proportion to represent statistical values, did not yield statistically

significant improvement in reading progress when receiving reading intervention using the Rigby Intervention by Design Program.

**Descriptive Statistics for Survey Results**

The design of the Content Knowledge Survey allowed survey participants to take the survey anonymously, creating the inability of the researcher to characterize specific demographic information about the survey participants. However, during the years of the case study, all teachers at the Caring Elementary School had an average of 13.9 years of teaching experience with 84.6% of teachers holding a Master's Degree or higher.

The first research question posed in this case study focused on teachers' beliefs and perceptions about the Rigby Intervention by Design program. Table 1 outlines the responses provided by the 10 survey participants.

Table 3

*Content Knowledge Survey Results*

| Themes | 1 Strongly Disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly Agree | Mean | Standard Deviation |
|---|---|---|---|---|---|---|---|
| 1. Instruction | 0 | 0 | 0 | 2 | 8 | 4.8 | 1.73 |
| 2. Curriculum | 0 | 0 | 1 | 4 | 5 | 4.4 | 1.12 |
| 3. Balanced Literacy | 0 | 0 | 0 | 4 | 6 | 4.6 | 1.35 |
| 4. Research | 0 | 0 | 0 | 5 | 5 | 4.5 | 1.24 |
| 5. Assessment | 0 | 1 | 0 | 4 | 5 | 4.3 | 1.13 |
| 6. PD | 1 | 0 | 1 | 7 | 1 | 3.7 | 1.17 |
| 7. Five Pillars of Literacy | 1 | 0 | 4 | 4 | 1 | 3.4 | 0.7 |
| 8. Research-Based Strategies | 0 | 0 | 1 | 7 | 2 | 4.1 | 1.18 |
| 9. Prior Knowledge | 0 | 1 | 0 | 6 | 3 | 4.1 | 1.08 |
| 10. New Ideas | 0 | 2 | 3 | 2 | 3 | 3.6 | 0.56 |
| 11. Student Data | 0 | 0 | 0 | 3 | 6 | 4.2 | 1.31 |
| 12. Intervention | 0 | 0 | 1 | 6 | 3 | 4.2 | 1.07 |
| 13. Resources and supports | 0 | 0 | 1 | 7 | 2 | 4.1 | 1.18 |

*Statement 1 of 13: Individual student need drives the instructional decisions I make in reading intervention.* The participants felt that the needs of the students drive the instructional decisions made as indicated by 100% of survey participants strongly agreed or agreed with the statement. The mean response to this statement was 4.8 out of 5, which is greater than any other response on the survey.

*Statement 2 of 13: The Friendly School District's curriculum is the key factor in my instructional decision-making.* The participants felt that the district curriculum is the

key factor in instructional decision-making as indicated by a mean response of 4.4 out of a possible 5.

*Statement 3 of 13: My understanding of the Balanced Literacy Model and its components influence the allocation of instructional time in my classroom.* The participants felt that the Balanced Literacy Model and its components influenced their allocation of instructional time in the classroom as indicated by a mean response of 4.6 out of a possible five.

*Statement 4 of 13: Research in the area of reading intervention influences my planning and instruction*. The participants felt that research in the area of reading intervention influenced their planning and instruction as indicated by a mean response of 4.5 out of a possible 5.

*Statement 5 of 13: Assessments are used to identify students who are reading below grade level.* The participants felt that assessments were used to identify students who were reading below grade level as indicated by a mean response of 4.3 out of a possible 5.

*Statement 6 of 13: The professional development I received on the implementation of the Rigby Intervention by Design Program was helpful.* The participants felt that the professional development received on the implementation of Rigby Intervention by Design was helpful as indicated by a mean response of 3.7 out of a possible 5.

*Statement 7 of 13: The knowledge I have gained from the Rigby Intervention By Design Program has changed my delivery of reading intervention in the areas of comprehension, phonics, phonemic awareness, fluency and vocabulary.* The participants felt that the knowledge gained from the program somewhat changed the delivery of

reading intervention in the areas of comprehension, phonics, phonemic awareness, fluency and vocabulary as indicated by a mean response of 3.4 out of a possible 5. Also noted, this was the least favorable response rate in the survey.

*Statement 8 of 13: Prior to the implementation of the Rigby Intervention By Design Program I was using research-based strategies to intervene with students reading below grade level*. The participants felt that the implementation of the program was using research-based strategies to intervene with students reading below grade level as indicated by a mean response of 4.1 out of a possible 5.

*Statement 9 of 13: The practices outlined in Rigby Intervention By Design are aligned with my prior knowledge regarding reading intervention.* The participants felt that the practices outlined in the program are aligned with prior knowledge regarding reading intervention as indicated by a mean response of 4.1 out of a possible 5.

*Statement 10 of 13: Using Rigby Intervention By Design has provided me with new ideas regarding implementation of reading intervention.* The participants felt that Rigby Intervention By Design has somewhat provided them with new ideas regarding implementation of reading intervention as indicated by a mean response of 3.6 out of a possible 5.

*Statement 11 of 13: I am adequately prepared to adjust my teaching based on student data.* The participants felt that they were adequately prepared to adjust teaching based on student data as indicated by a mean score of 4.2 out of a possible 5.

*Statement 12 of 13: The Friendly School District has prepared me to intervene for all students reading below grade level.* The participants felt that the Friendly School

District has prepared them to intervene for all students reading below grade level as indicated by a mean score of 4.2 out of a possible 5.

*Statement 13 of 13: I have the resources and supports necessary to intervene for all students reading below grade level.* The participants felt that they had the resources and supports necessary to intervene for all students reading below grade level as indicated by a mean response of 4.1 out of a possible 5.

In comparing information obtained from the Content Knowledge Survey, teachers responded positively to the statement regarding individual student need drives the instructional decisions made in reading intervention, with 80% of those surveyed replying with a Strongly Agree response. Areas that did not receive a positive response included the following: the impact of Rigby Intervention by Design changing the delivery of reading instruction in the five pillars of literacy, with only 50% of those surveyed replying with a Strongly Agree or Agree response; Rigby Intervention by Design providing new ideas regarding implementation of reading intervention, with only 50% of those surveyed replying with a Strongly Agree or Agree response.

The researcher further analyzed the Content Knowledge Survey and examined the responses by each participant disaggregated by grade level. Table 4 demonstrates the responses of all teacher participants, second grade teacher participants and third grade teacher participants and the percentage of positive responses indicated as Strongly Agree (SA) or Agree (A).

Table 4

*Content Knowledge Survey Results (reported by grade level)*

| Survey Statement Themes | Strongly Agree/Agree (Total) | Strongly Agree/Agree (2nd grade teachers) | Strongly Agree/Agree (3rd grade teachers) |
|---|---|---|---|
| 1. Instruction | 100% | 100% | 100% |
| 2. Curriculum | 90% | 80% | 100% |
| 3. Balanced Literacy | 100% | 100% | 100% |
| 4. Research | 100% | 100% | 100% |
| 5. Assessment | 90% | 80% | 100% |
| 6. Professional Development | 80% | 80% | 80% |
| 7. Five Pillars of Literacy | 50% | 20% | 80% |
| 8. Research-Based Strategies | 90% | 100% | 60% |
| 9. Prior Knowledge | 90% | 100% | 80% |
| 10. New Ideas | 50% | 60% | 40% |
| 11. Student Data | 90% | 80% | 100% |
| 12. Intervention | 90% | 80% | 100% |
| 13. Resources and Supports | 90% | 80% | 100% |

*Statement 1 of 13: Individual student need drives the instructional decisions I make in reading intervention.* The participants felt that the needs of the students drive the instructional decisions made as indicated by 100% of survey participants strongly agreed or agreed with the statement.

*Statement 2 of 13: The Friendly School District's curriculum is the key factor in my instructional decision-making.* The participants felt that the district curriculum is the

key factor in instructional decision-making as indicated by 90% of survey participants strongly agreed or agreed with the statement. One of the second grade participants, or 20%, rated this statement with a neutral response.

*Statement 3 of 13:My understanding of the Balanced Literacy Model and its components influence the allocation of instructional time in my classroom.* The participants felt that the Balanced Literacy Model and its components influence the allocation of instructional time in the classroom as indicated by 100% of survey participants strongly agreed or agreed with the statement.

*Statement 4 of 13: Research in the area of reading intervention influences my planning and instruction*. The participants felt that research in the area of reading intervention influences planning and instruction as indicated by 100% of survey participants strongly agreed or agreed with the statement.

*Statement 5 of 13: Assessments are used to identify students who are reading below grade level.* The participants felt that assessments are used to identify students who are reading below grade level as indicated by 90% of survey participants strongly agreed or agreed with the statement. One of the second grade participants, or 20%, rated this statement with a disagree response.

*Statement 6 of 13: The professional development I received on the implementation of the Rigby Intervention by Design Program was helpful.* The participants felt that the professional development received on the implementation of Rigby Intervention by Design was helpful as indicated by 80% of survey participants strongly agreed or agreed with the statement. One of the second grade participants, or 20%, rated this statement

with a neutral response. One of the third grade participants, or 20%, rated this statement with a Strongly Disagree response.

*Statement 7 of 13: The knowledge I have gained from the Rigby Intervention By Design Program has changed my delivery of reading intervention in the areas of comprehension, phonics, phonemic awareness, fluency, and vocabulary.* The participants felt that the knowledge gained from Rigby Intervention By Design somewhat changed the delivery of reading intervention in the areas of comprehension, phonics, phonemic awareness, fluency, and vocabulary as indicated by 50% of survey participants strongly agreed or agreed with the statement. One of the second grade participants, or 20%, rated this statement with a neutral response. Three of the third grade participants, or 60%, rated this statement with a neutral response and one of the third grade participants rated this statement with a strongly disagree response.

*Statement 8 of 13: Prior to the implementation of the Rigby Intervention By Design Program I was using research-based strategies to intervene with students reading below grade level*. The participants felt that the implementation of the Rigby Intervention By Design Program was using research-based strategies to intervene with students reading below grade level as indicated by 90% of survey participants strongly agreed or agreed with the statement. All of the second grade participants, or 100%, rated this statement with a strongly agree or agree response. Two of the third grade participants, or 40%, rated this statement with a neutral response.

*Statement 9 of 13: The practices outlined in Rigby Intervention By Design are aligned with my prior knowledge regarding reading intervention.* The participants felt that the practices outlined in Rigby Intervention By Design are aligned with prior

knowledge regarding reading intervention as indicated by 90% of survey participants strongly agreed or agreed with the statement. All of the second grade participants, or 100%, rated this statement with a strongly agree or agree response. One of the third grade participants, or 20%, rated this statement with a disagree response.

*Statement 10 of 13: Using Rigby Intervention By Design has provided me with new ideas regarding implementation of reading intervention.* The participants felt that Rigby Intervention By Design has somewhat provided them with new ideas regarding implementation of reading intervention as indicated by 50% of survey participants strongly agreed or agreed with the statement. One of the second grade participants, or 20%, rated this statement with a neutral response and one of the second grade participants, or 20%, rated this statement with a disagree response. Two of the third grade participants, or 40%, rated this statement with a neutral response and one of the third grade participants, or 20%, rated this statement with a disagree response.

*Statement 11 of 13: I am adequately prepared to adjust my teaching based on student data.* The participants felt that they were adequately prepared to adjust teaching based on student data as indicated by 90% of survey participants strongly agreed or agreed with the statement. One of the second grade participants, or 20%, rated this statement with no response. All of the third grade participants, or 100%, rated this statement with a strongly agree or agree response.

*Statement 12 of 13: The Friendly School District has prepared me to intervene for all students reading below grade level.* The participants felt that the Friendly School District has prepared them to intervene for all students reading below grade level as indicated by 90% of survey participants strongly agreed or agreed with the statement.

One of the second grade participants, or 20%, rated this statement with a neutral response. All of the third grade participants, or 100%, rated this statement with a strongly agree or agree response.

*Statement 13 of 13: I have the resources and supports necessary to intervene for all students reading below grade level.* The participants felt that they had the resources and supports necessary to intervene for all students reading below grade level as indicated by 90% of survey participants strongly agreed or agreed with the statement. One of the second grade participants, or 20%, rated this statement with a neutral response. All of the third grade participants, or 100%, rated this statement with a strongly agree or agree response.

Results indicated that the ten survey participants had similar experiences with three of the 13 statements by indicating they strongly agreed or agreed. Those statements were: (1)- Individual student need drives the instructional decisions, (3)- Understanding of the Balanced Literacy Model and its components influence the allocation of instructional time in the classroom, and (4)- Research in the area of reading intervention influences planning and instruction. Other noteworthy results include two areas indicating that only five of the 10 survey participants strongly agree or agreed. Those statements were: (7) - The knowledge gained from the Rigby Intervention By Design Program has changed delivery of reading intervention in the areas of comprehension, phonics, phonemic awareness, fluency, and vocabulary, and (10) - Using Rigby Intervention By Design has provided new ideas regarding implementation of reading intervention.

Also evidenced by the results (see Appendix F ) one of the second grade participants had five out of 13 neutral responses, or 38%, two out of 13 disagree responses, or 15%, and one out of 13 no response, or 7%. Overall, second grade survey participants responded with strongly agree or agree on 56 out of 65 times, or 86% of the time. Third grade survey participants responded with strongly agree or agree on 54 out of 65 times, or 83% of the time.

The second research question posed in this case study focused on the implementation of the Rigby Intervention By Design Program and the effect on the achievement of students reading below grade level or struggling with specific reading skills by the end of the academic year. Table 5 represents the level of implementation observed by the researcher.

Table 5

*Level of Implementation*

| | 2- High Level of Implementation | 1- Inconsistent Level of Implementation | 0- Low Level of Implementation |
|---|---|---|---|
| Second grade teachers | 10 | 2 | 3 |
| Third grade teachers | 12 | 3 | 0 |

During the literacy walkthroughs, the researcher evaluated levels of implementation focused on preparation, pacing, delivery (following the Rigby Intervention By Design Intervention Cards) and student engagement. Characteristics of high levels of implementation included materials being ready (preparation), lessons beginning promptly and each activity finished in the allotted time (pacing), following the given script (delivery), and students in the group on task (student engagement). Characteristics of inconsistent levels of implementation included materials unorganized

(preparation), lessons beginning promptly but losing time in transition between activities (pacing), following the script with some modifications (delivery), and most students on task (student engagement). Characteristics of low levels of implementation included materials not being present or referenced (preparation), lesson starting late and activities not following the time guidelines (pacing), no clear alignment with the script provided (delivery), and most students not on task (student engagement).

The researcher observed all second and third grade teacher participants to demonstrate a high level of implementation of the Rigby Intervention by Design program during the literacy intervention block 73% of the time. Second grade teacher participants demonstrated a high level of implementation of the Rigby by Design program during the literacy intervention block 67% of the time and third grade teacher participants demonstrated a high level of implementation of the Rigby Intervention by Design program 80% of the time observed. Also noted, second grade teacher participants demonstrated a low level of implementation 20% of the time observed during the literacy intervention block while third grade teacher participants did not demonstrate low levels of implementation at any time during the observation of the Rigby Intervention by Design program during the literacy intervention block.

**Summary**

The researcher presented quantitative data in this chapter focused on two hypotheses. The first null hypothesis was, "Students at the end of first grade who are reading below grade level or struggling with specific reading skills will not make adequate progress to read at or above grade level by the end of the second grade year as a result of receiving intervention using the Rigby Intervention by Design Program as

measured by the Friendly School District's report card data." No observable difference appeared in the number of students performing at the "not meeting" category as reported on the Friendly School District's report card in the 2008-2009 and 2009-2010 school years existed, therefore there was no need to perform a Z test. These results caused a failure to reject the null hypothesis.

The second null hypothesis was, "Students who recovered at or above grade level status by the end of the second grade academic year will not maintain at or above grade level status by the end of third grade as measured by the Friendly School District's report card data." A Z test performed to represent statistical values did not produce a significant increase in achievement levels between the year before program implementation (2008-2009) and the year of implementation (2009-2010). Furthermore, no significant increases in the year of program implementation (2009-2010) and the second year of program implementation (2010-2011) existed. These results cause a failure to reject the second null hypothesis.

Further qualitative data collected included examining the level of implementation of the Rigby Intervention by Design program. The second research question was, "In what ways will teacher's implementation of the Rigby Intervention by Design program effect achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?" Second and third grade teachers participated in literacy walkthroughs. At the time of the literacy walkthrough, the researcher observed the level of implementation of the Rigby Intervention by Design program as a component of the reading intervention block. A high level of program implementation noted for all teachers 76% of the time during the literacy walkthroughs,

with third grade teachers demonstrating a high level of program implementation 80% of the time observed.

Further discussion and triangulation of quantitative and qualitative data will occur in Chapter 5.

## Chapter Five: Discussion and Reflection

The Caring Elementary School is a suburban school located in the central region of St. Charles County, Missouri. The school serves about 900 students, kindergarten through fifth grade, and employs approximately 100 certified and non-certified staff. The Caring Elementary School has enjoyed of history of strong academic achievement in the area of reading and has seen respectable gains on the Missouri Achievement Program (MAP) over the past five years. However, the school has recently experienced an increasing number of students entering school struggling with early literacy concepts and skills.

Teachers at the Caring Elementary School have participated in ongoing professional development that has included studies that focus on Professional Learning Communities, instructional strategies, assessment, and intervention. As teachers have progressed in their understanding of how to meet the needs of students, they have identified the necessity to providing a tiered approach to reading instruction to help increase achievement of students reading below grade level.

The core reading materials that the teachers in the researched school use, Rigby Literacy by Design, are the foundation for teaching reading to the general population. Teachers have found that while the core-reading program meets the needs of many of its learners, it is not meeting the specific needs of all learners. After much discussion about how to best use the newly adopted materials, Rigby Literacy by Design, and with limited funding available, an identified resource, Rigby Intervention by Design, offered this group a tool to utilize.

The primary purpose of this case study was to determine whether the implementation of a resource, Rigby Intervention by Design, was successful for improving reading achievement for students at the Caring Elementary School who have been identified as below-level readers or who struggle with specific reading skills by the end of an academic year. Thirty students were identified as needing further reading support; therefore, the Rigby Intervention by Design Program became an integral part of the reading program in second and third grade at the Caring Elementary School.

A secondary purpose of this case study conducted an evaluation of Rigby Intervention by Design to determine if it met the needs of both the student and the teacher. Data collected and examined from the end of the academic year in first grade, second grade, and third grade determined if students made gains in their reading ability as reported on the Friendly School District's report card. The Friendly School District's report card communicated achievement levels as Above (A), Meeting (M), and Not Meeting (NM) grade level expectancy.

Additionally, research questions investigated during this case study included how the beliefs and perceptions of teachers using the Rigby Intervention by Design program affected the achievement of students reading below grade level or students struggling with specific reading skills. An electronic survey, distributed to teachers regarding their beliefs and perceptions of the intervention program, focused on the five pillars of reading instruction. Finally, literacy walkthroughs conducted to determine the level of implementation of the Rigby Intervention by Design program, took place during the literacy intervention block. The researcher also observed teacher participants, three times each, using a literacy walkthrough checklist to determine implementation of the Rigby

Intervention by Design program with below grade level readers or students struggling with specific reading skills.

**Connection to Literature**

The review of literature presented in Chapter 2 examined issues of readers in need of intervention by looking at historical findings and legislation in reading research, including implications for students and teachers. The No Child Left Behind Act (2001) has made a substantial impact on the teaching and learning that takes place in schools today. DuFour and Eaker (1998) suggested that faculties collaborate and take a detailed look in regards to student learning by asking the question, "What will we do if they don't learn it?"

Research points to the importance of a foundation in reading for a child's success in school at all levels as well as the overall quality of life (Snow et al., 1998). Socio-economic factors may have a great influence on children at a young age. Lyon (2000) suggests that about 60% of students are successful in reading due to the type of reading instruction they receive in their early years of education. For children with limited exposure at an early age, attaining reading skills can be more difficult. While many factors affect early reading abilities, research suggests that those children who enter school without quality literacy experiences and exposure face a greater risk of failure.

The research also reported the need to teach children essential skills in literacy early in their education. The National Reading Panel (2000) recommended that best-practice literacy programs must include instruction and assessment in the five pillars of literacy, which include: (a) phonemic awareness, (b) phonics, (c) fluency, (d) vocabulary, and (e) comprehension (NRP, 2000). Significant reading difficulties may occur if

student's experience difficulty in any of these areas. Lyon (2003) acknowledges that a majority of children who do not receive the appropriate reading instruction will continue to have reading problems into adulthood.

While most students will receive instruction through a core curriculum, Tier 1 approach, for some students it is necessary to provide a reading intervention or Tier 2 approach. Buffum, et al., (2012) advocated that effective interventions are research-based, directive, administered by trained professionals, are targeted and timely. Rigby Intervention by Design is a Tier 2 program meant to help teachers implement intervention strategies based on the five pillars of literacy (Opitz, 2008). On-going instruction in intervention and frequent assessment assist the teacher in designing targeted instruction in specific skill deficits with the ultimate goal being skill attainment.

In order for such high levels of student learning to take place, educators must recognize the investment necessary in educating teachers. Professional development designed to sustain a collaborative learning process that supports the growth of individual teachers as well as teams of teachers through job-embedded processed is necessary (Speck & Knipe, 2005). Moore and Whitfield (2009) endorsed the practice of helping teachers develop a repertoire of strategies used for planning instruction to allow staff members to feel a sense of collaboration and collegiality as opposed to feeling alone and without any support.

**Implications of Qualitative Results**

This research project was a case study of an intervention program, Rigby Intervention by Design, implemented at the Caring Elementary School in the Friendly School District. There were two research questions. The first question was, *In what*

*ways will teachers' beliefs and perceptions about the Intervention by Design Program affect the achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?* In analyzing the results of a Content Knowledge Survey, the researcher found that 80% or more of teachers strongly agreed or agreed with all statements except the following:

Statement #7- The knowledge I have gained from the Rigby Intervention by Design Program has changed my delivery of reading intervention in the areas of comprehension, phonics, phonemic awareness, fluency, and vocabulary (50% of participants strongly agreed or agreed). Due to the emphasis that balanced literacy instruction has put on the five pillars of literacy, the researcher feels that some teachers felt they already had a command of instruction in the five pillars of literacy.

Statement #10- Using Rigby Intervention by Design has provided me with new ideas regarding implementation of reading intervention (50% of participants strongly agreed or agreed). While the Rigby Intervention By Design program provided a good structure and pace for teachers to follow, the researcher feels that some teachers had an understanding of what instruction should take place in an effective reading intervention.

Of the 13 Content Knowledge Survey statements, only three had particular implications regarding the usage of the Rigby Intervention by Design Program. The three statements specifically recalling experience with the Rigby Intervention by Design Program include the two statements noted above as well as the following:

Statement #6- The professional development I received on the implementation of the Rigby Intervention by Design Program was helpful (80% of teachers agreed or strongly agreed with this statement). Since the Rigby Intervention By Design program

was a new tool for teachers to use, the researcher feels that they were appreciative that time was spent on going over the particulars of the program and what the program had to offer teachers.

Also noteworthy, when disaggregating Content Knowledge Survey results by grade level, both second and third grade participants indicated disagreement with:

Statement #10- Using Rigby Intervention by Design has provided me with new ideas regarding implementation of reading intervention. This researcher would conclude that teachers felt that other factors had a greater impact on student reading achievement than the Rigby Intervention by Design Program in providing ideas regarding reading intervention. Factors that may affect their response may include previous professional development and resources in the area of reading intervention.

Another observation from the Content Knowledge Survey would include three statements where all teachers strongly agreed or agreed. None of these statements indicates feelings about the Rigby Intervention By Design specifically, leading the researcher to believe that teachers do not have strong positive feelings about the program.

Statement #1- Individual student need drives the instructional decisions I make in reading intervention. Factors that may affect teacher responses in this area include the amount of time the teachers spend listening to individual students read as well as anecdotal records that teachers keep on each of their students.

Statement # 3- My understanding of the Balanced Literacy Model and its components influence the allocation of instructional time in my classroom. Teachers had previously received professional development on the components of balanced literacy

and had begun implementation in the classroom before using the Rigby Intervention By Design program.

Statement #4- Research in the area of reading intervention influences my planning and instruction. Again, teachers had previously received professional development on the components of balanced literacy including research on the five pillars of literacy. Teachers had begun implementation of balanced literacy in the classroom before using the Rigby Intervention By Design program.

Teachers who have recently completed a teacher education program or targeted professional development on reading instruction may have felt the previous trainings they participated in provided a better understanding of reading instruction and intervention. Overall Content Knowledge Survey results suggested that teachers have embraced reading instruction and intervention as beneficial components of their total reading program. There was no significant difference in second and third grade participant responses even though third grade teacher participants were in the implementation year of the program while second grade teachers were in their second year of program implementation.

The second research question in this study was, *"In what ways will teacher's implementation of the Intervention by Design program affect achievement of students who are reading below grade level or students struggling with specific reading skills by the end of the academic year?"* Another component included in the qualitative portion of this study was a literacy intervention walkthrough, which consisted of three classroom visits of about five to seven minutes each. Using the Reading Intervention Checklist, the researcher analyzed levels of implementation of the Rigby Intervention by Design

Program during the literacy intervention block. On the literacy walkthrough checklist the researcher included an implementation code for each classroom visit and a copy of the literacy walkthrough presented to each teacher participant. The categories of participation included: High Level of Implementation (2), Inconsistent Level of Implementation (1), and Low Level of Implementation (0). Overall Level of Implementation results show all second and third grade teacher participants to demonstrate a high level of implementation during the literacy intervention block 73% of the time. Also noteworthy, when disaggregating results by grade level, the researcher observed second grade teachers with a low level of implementation 20% of the time observed while the researcher did not observe any third grade teachers with a low level of implementation. When reviewing the data on levels of implementation, the researcher concluded while students in a classroom with high levels of implementation experienced teachers who were prepared, kept up with recommended pacing and delivery and were engaged in the lesson, the achievement data did not show a direct correlation. Possible reasons for this could include the fact that the researcher observed second grade teachers during their second year of implementation of the Rigby Intervention by Design Program and observed third grade teachers during their implementation year of the program.

**Implications of Quantitative Results**

There were two hypotheses presented in this case study. The first hypothesis was, "*Students at the end of first grade who are reading below grade level or struggling with specific reading skills will make adequate progress to read at or above grade level by the end of the second grade year as a result of receiving intervention using the Intervention by Design Program as measured by the Friendly School District's report card data."* At

the end of first grade (2008-2009 school year), 20% of students were not meeting grade level expectations as reported on the Friendly School District's Report Card. At the end of second grade (2009-2010 school year), 20% of students were not meeting grade level expectations as reported on the Friendly School District's Report Card. Study results presented no difference in the percentage of students reading below grade level at the end of first and second grade and thus failed to reject the null hypothesis.

Factors that may have influenced the results include the introduction and implementation of a new resource, Rigby Intervention by Design, which students had no previous exposure to in the classroom. Additionally, measures used to identify whether or not students were exceeding, meeting, or not meeting expectations included both formative and summative methods of assessment. Some formative measures can be subjective in nature and used to identify skill deficits amongst students. Instrument reliability was addressed in Chapter 1 and focused on the lack of consistent instruments to measure achievement in the primary grades. The researcher addressed participant limitations in Chapter 1 and included differences in socioeconomic background, ethnicity, reading ability and age. In this case study, student characteristics focused on current functioning and did not take into account the amount of growth that may have taken place since the student enrolled in school. Finally, between each grade level, reading characteristics and expectations continue to change and grow in their complexity. For the student who is not meeting grade level expectations, this can prove to be both frustrating and difficult to overcome.

The second hypothesis was, *"Students who recovered at or above grade level status by the end of the second grade academic year will maintain at or above grade level*

*status by the end of third grade as measured by the Friendly School District's report card data."* At the end of the second grade academic year (2009-2010), 79.9% of students were reading at or above grade level. At the end of the third grade year (2010-2011), 66.6% of students were reading at or above grade level. These results do not support the hypothesis that second grade students would maintain at or above grade level status. Moreover, a Z test did not produce a statistical difference in the number of students maintaining at or above grade level status from the end of second to the end of third grade. The same circumstances and limitations as mentioned above present themselves in the second hypothesis. Again, this resulted in a failure to reject the null hypothesis.

**Triangulation of Data**

Based on information presented regarding qualitative and quantitative data, the researcher can draw inferences regarding the connection of both types of studies to this case study. Qualitative data implicates a positive feeling toward reading instruction and intervention, but not necessarily the Rigby Intervention By Design Program, as was presented in the Content Knowledge Survey Analysis in Chapter 3 in which 85% of questions were responded to with an overall rating of strongly agree or agree at least 80% of the time. Also indicative of a positive feeling toward reading intervention, the Level of Implementation Data, also presented in Chapter 3, implies high levels of implementation 73% of the time observed during the literacy intervention block. A closer look at quantitative data in Chapter 4 presents students reading achievement as above or meeting expectations 80% at the end of first grade (2008-2009), 79.9% at the end of second grade (2009-2010), and 66.6% at the end of third grade (2010-2011). Students at the end of first and second grade proved no substantial difference in reading

achievement. However, a decrease in reading achievement between the end of second and third grade existed, although not proven statistically noteworthy.

The researcher concluded that a relationship exists in the implementation of the Intervention by Design Program (Table 2), the Content Knowledge Survey results (Table 1) and achievement levels of student's pre-program implementation and during the first year of implementation (Table 3). When examining the qualitative data, all third grade teachers strongly agreed or agreed with statements on the Content Knowledge Survey 62% of the time and demonstrated high levels of implementation during literacy intervention walkthroughs (Table 2) 80% of the time observed. Conversely, all second grade teachers strongly agreed or agreed with statements on the Content Knowledge Survey 38% of the time and demonstrated high levels of implementation during literacy intervention walkthroughs (Table 2) 67% of the time observed. This researcher would have expected that the quantitative data in this case study would prove third grade students to have the highest levels of achievement; however, Table 3 shows an increase of 13.3% students in the Not Meeting category than in second grade. The triangulation of data does not present a strong correlation between all three measures; however, a there is a noticeable trend in the qualitative data presented. The qualitative data suggests that third grade teachers who strongly agreed or agreed with most of the statements on the Content Knowledge Survey (Table 1) also demonstrated high levels of implementation of the Intervention by Design Program when observed (Table 2).

**Process Reflections**

In this case study the researcher is also the principal of the Caring Elementary School. The purpose of the research conducted focused on insights into the achievement

levels of students after using the Rigby Intervention By Design Program, how the program was implemented by teachers, and their thoughts about the program. Due to the personal implications of the results, as the researcher I found challenges especially when collecting qualitative data. First, I was disappointed in the number of participants in the Content Knowledge Survey. The survey, distributed through a third party facilitator, did not request that participants identify themselves. As the researcher, I found myself wondering, who did not participate and their reasons for not participating. Due to the anonymity of the survey, I did not determine the names of the teachers who chose not to participate, however found it a point of personal concern because I did not want teachers to feel this as an evaluative process affecting their career.

As the researcher, I personally conducted three literacy walkthroughs in each participant's classroom to determine the level of implementation. While the literacy walkthroughs are a common practice in the Caring Elementary School, teacher participants may have felt additional pressure as study participants. This also has a correlation to the comfort level of the participant with the professional development they received using the Rigby Intervention By Design Program. Using data collected from the Content Knowledge Survey, only 50% of the teachers surveyed felt that the Rigby Intervention By Design tool provided them with new ideas regarding the implementation of reading intervention or new ideas in delivering reading instruction in the five pillars of literacy. Teachers observed during the implementation year may not have felt as comfortable with the resource as teachers observed after the first year of implementation due to the unfamiliarity of the intervention tool or its ability to transform intervention instruction.

After careful reflection, there are a few things I would do differently considering my role as building principal. The first would include providing the teachers an opportunity to give additional input or comments on the Content Knowledge Survey. Survey participants would be required to give further feedback on any items they marked as disagree or strongly disagree giving the researcher additional insights into the responses provided by the participants. Another way I could have collected meaningful feedback is through a focus group facilitated by a third party not involved with the study.

Another area I would reassess includes the literacy walkthroughs to determine the level of implementation. Additional professional development support prior to implementation of the intervention tool would have been helpful. The support provided for teachers came from a third party, not employed by the Friendly School District. This made it challenging to access answers to questions teachers may have or have additional supports in the school setting. By identifying a local trainer, preferably a literacy specialist employed by the Friendly School District, teachers would have a local person to contact with questions or concerns. The local trainer could also provide teachers ongoing professional development by giving an opportunity to observe other teachers implementing the program prior to implementation in their own classroom, check teacher's progress throughout implementation, and provide feedback. This could also provide opportunities for teachers to work collegially, learning from each other.

Finally, the researcher would identify a common assessment tool other than the report card to measure the success of the Rigby Intervention By Design program. Since the Friendly School District has recently acquired a common literacy assessment for students in kindergarten through fifth grade, the researcher would easily be able to

follow the progress of students by week, by quarter, by year and over multiple years. This would be particularly helpful in identifying trends in achievement growth.

**Recommendations for Intervention Instruction-Based on Practice**

Research indicates that if children do not become successful readers by approximately third grade it is difficult to close the achievement gap between themselves and their peers in later years (Dorn et al., 1998). The IDEA Act of 2004, signed into law by President Bush, introduced the Response To Intervention model intended to help educators connect student achievement data with classroom instruction. In this model, students are receiving extra help or intervention as a preventative measure rather than waiting for them to fail. The researcher in this case study bases recommendations on best practices in early intervention and prevention for students and instructional supports for teachers.

First, the school board, administration and teachers of the Friendly School District must be committed to early identification and intervention for at-risk students. The researcher in this case analyzed student data at the end of their first grade year; however, studies indicate that children who encounter reading problems typically have had little exposure to reading prior to the primary grades (Snow et al., 1998). It is imperative that school districts provide early supports for all students to acquire and develop literacy skills at a young age. In this case study, by the end of first grade, 20% of students were already in the not meeting category as reported on the Friendly School District's Report Card.

Second, the school board, administration and teachers of the Friendly School District must be committed to implementing research based best practices in reading

instruction and intervention. In this case study, the Friendly School District used the Rigby Intervention by Design Program as a supplement to the core-reading program, Rigby Literacy by Design, thereby increasing the total amount of reading instruction for students not meeting grade level expectancy. As student expectations increase as they get older, the Friendly School District should also acknowledge the need to research other resources or programs that can support students as the achievement gap widens between them and their peers. In this case study, the achievement gap began to widen between students' performance at the end of second and third grade with 13.3% more students falling in the not meeting category as reported on the Friendly School District's Report Card (Table 3). Buffum, et al., (2012) remind educators that there is no "silver bullet" in addressing the needs of at-risk readers, however when educators come together to evaluate scientifically researched products they can identify effective teaching resources and practices.

Third, the school board, administration and teachers of the Friendly School District must be committed to teacher education and professional development in the area of reading instruction and intervention. Several studies indicated that many teachers are not prepared to teach reading, receiving little formal instruction in reading development in their educator preparedness coursework (McCardle & Chhabra, 2004). All teachers must receive high quality professional development that is ongoing; not only through the school year but also as new teachers or members new to the grade level join the team. It must include methods to provide research based best practices in the classroom as well as with small groups or individual students. Districts can accomplish this in many ways including workshops on literacy, reading instruction or reading intervention, participating

in collegial mentoring and partnerships, or appropriating time and funds to support teachers in on-site field visits to schools where research-based best practices have proven successful.

Fourth, the school board, administration, and teachers of the Friendly School District must be committed to ongoing assessment of the needs of the teaching staff. The Friendly School District and other school districts must bear in mind that just as student's needs change so do the needs of our teachers. Ongoing evaluation of professional development will assist in keeping pace with the needs of the staff providing instruction and intervention for students. Fullan (2008) reminds us that schools must assess and address the need for teachers to learn on the job and address specific areas in need of improvement. Assessments such as informal and formal evaluations, surveys, and exit card activities can assist in keeping a handle on the needs of the teaching staff and allow districts to design a plan to meet the needs. The Content Knowledge Survey (Table 1) in this study suggests that the Rigby Intervention by Design Program did not have an overwhelmingly positive impact on how teachers delivered reading intervention in the five pillars of literacy or in providing new ideas regarding the implementation of reading intervention. Through this assessment, the Friendly School District could identify other useful resources to supplement intervention and provide new ideas to the teaching staff.

Fifth, the school board, administration and teachers of the Friendly School District must be committed to providing teachers with common assessment tools, including progress-monitoring components, to track student's individual growth, and achievement throughout their elementary experience. Formative assessments such as running records and anecdotal notes, while valuable in assessing students, prove to be

more subjective that assessment tools or universal screening tools used to identify specific skill deficits. Research indicates that listening to students read and observing reading behaviors is an effective practice with younger readers (Fountas & Pinnell, 2006). However, other research points to the need to look beyond tests of single skills through the practice of universal screening tools and progress monitoring (National Center on Student Progress Monitoring, 2007). Formative assessment practices used in this study did not universal screening or progress monitoring tools. Instead, the researcher chose to monitor report card data and convey results.

**Recommendations for Future Research**

The decision to study the Rigby Intervention by Design Program at the Caring Elementary School and the influence of the Rigby Intervention by Design Program on student achievement reflected the researcher's personal experience as a classroom teacher, elementary principal, and the desire to ensure all students experience success in reading in the classroom and beyond. Designed to examine the use and implementation of the Rigby Intervention by Design Program in the primary grades, this case study targeted students in the second and third grade. Of noted importance were the objectives to determine the relationship of the Rigby Intervention by Design Program implementation, teacher's perceptions and beliefs regarding the program, and the program effects on student achievement. Taking into consideration the findings of the qualitative and quantitative findings of this study, further qualitative and quantitative investigations should be explored. Recommendations for future research include the following:

1. The researcher would recommend taking a closer look at the impact of Rigby Intervention by Design within the different schools or school districts to determine if the results are similar or different from the findings in this study,

2. The researcher would recommend further study on the impact of the Rigby Intervention by Design Program two years later, at the end of fifth grade, to determine if students maintained gains in achievement before they reach middle school.

3. The researcher would recommend a comparison focused on the student achievement in non-Rigby Intervention by Design buildings or districts.

4. The researcher would recommend further analysis on the impact of the Rigby Intervention by Design Program on specific student sub groups within a building.

6. The researcher would recommend a study on perception of new teachers after implementing the Rigby Intervention By Design Program for one year to determine if the program provides adequate supports to new teachers.

7. The researcher would recommend conducting a student exit survey at the end of fifth grade to determine student's perceptions of the impact of the Rigby Intervention by Design program in their progress as a reader would be beneficial to demonstrate students' perceptions about the program.

**Conclusion**

This study indicates that while the implementation of the Rigby Intervention by Design Program did not prove to make a statistical difference in the reading achievement level of second and third grade students, other factors deserve recognition. Both qualitative measures used, the Content Knowledge Survey and the Levels of Implementation Observation, show that teachers possessed a favorable outlook of the

Rigby Intervention by Design Program through survey responses and levels of program implementation. Therefore, it is reasonable to conclude that many factors indicate student achievement in the area of literacy, including program materials, teachers' beliefs and perceptions, and teacher's level of program implementation. The study also indicated some barriers to the achievement results after implementation of the Rigby Intervention by Design Program. Teachers did not believe that the knowledge gained from the Rigby Intervention by Design Program changed the delivery of reading intervention or provided new ideas in the implementation of reading intervention. This was also evident in the level of program implementation as observed during literacy walkthroughs, especially with second grade teachers, observed with a high level of implementation only 67% of the time.

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## APPENDIX A

Permission Letter to Teacher

Teacher
XXXXX School
XXXXX, Missouri

I have received approval from the Friendly School District to conduct a dissertation research project at XXXXX School for the purpose of studying teacher's knowledge, perceptions and beliefs about intervention in reading and the implementation of the Intervention by Design Program.

Currently, I am a doctoral candidate in the Department of Education at Lindenwood University and an administrator at the Caring Elementary School in the Friendly School District. I will be completing all course requirements in the fall of 2011 in anticipation of conducting my dissertation research during the fall of 2011 as well.

It will take approximately 6 to 10 weeks to complete the research component of my study. The data will be gathered in the fall of 2011. Your participation in this study will

include completion of an online survey. All information will be confidential and pseudonyms will be used in reporting findings. During the research, instructional and plan time will not be interrupted or hindered. Information gathered for the purpose of this study will not be used in an evaluative manner.

Please complete the consent form that is attached to this letter and return it to me soon. Your participation in this study is greatly appreciated. If you have questions or concerns, feel free to contact me at (636) 851-4300. I welcome the opportunity to discuss my research with you and answer any questions that you may have.

Respectfully,

Bridgett Niedringhaus

Doctoral Candidate

Lindenwood University

## APPENDIX B

Literacy Walkthrough Checklist

Name of Instructor: School:

Name of Observer: Number of students in group:

Visits:
One- Date: Time:

Two- Date: Time:

Three- Date: Time:

Implementation Code

0- Low Level of Implementation
1- Inconsistent Level of Implementation
2- High Level of Implementation

| Visits | | | | 2 | 1 | 0 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | Preparation | Materials ready | Materials unorganized | Materials not present or not referenced |
| | | | Pacing | Lesson begins promptly and each activity is finished in the allotted time | Lesson begins promptly but some time is lost in transition between activities | Lesson starts late and activities do not follow time guidelines |
| | | | Delivery (follows Teaching Cards) | Follows script given | Usually follows script with some modifications | No clear alignment with script |
| | | | Student Engagement | Students in group on task | Most students on task | Most students not on task |

Adapted from Principal's Reading Walk-Through: K-3 Checklist
http://www.centeroninstruction.org

## APPENDIX C

Content Knowledge Survey

(Administered electronically)

Please rate the following statements as follows:
1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

1. Individual student need drives the instructional decisions I make in reading intervention.
2. The Francis Howell School District curriculum is the key factor in my instructional decision-making.
3. My understanding of the Balanced Literacy Model and its components influence the allocation of instructional time in my classroom.
4. Research in the area of reading intervention influences my planning and instruction.
5. Assessments are used to identify students who are reading below grade level.
6. The professional development I received on the implementation of the Intervention by Design Program was helpful.
7. The knowledge I have gained from the Intervention by Design program has changed my delivery of reading intervention in the areas of comprehension, phonics, phonemic awareness, fluency and vocabulary.
8. Prior to the implementation of the Intervention by Design program I was using research-based strategies to intervene with students reading below grade level.
9. The practices outlined in Intervention by Design are aligned with my prior knowledge regarding reading intervention.

10. Using Intervention by Design has provided me with new ideas regarding implementation of reading intervention.
11. I am adequately prepared to adjust my teaching based on student data.
12. The Francis Howell School District has prepared me to intervene for all students reading below grade level.
13. I have the resources and supports necessary to intervene for all students reading below grade level

## APPENDIX D

Fountas & Pinnell Text Level Descriptions

| Text Level | Description |
|---|---|
| A | • One line of text *(focus on print, directionality)*; Large spaces between words<br>• Sentence structure is similar to students' language; Repeated pattern<br>• Includes basic sight words<br>• Punctuation includes periods, question marks, and exclamation marks<br>• Pictures are highly supportive<br>• Topics are familiar to children<br>• Focus on a single idea |
| B | • Two lines of text *(return sweep)*; Large spaces between words<br>• Sentences increase in length; Sentence structure is similar to students' language<br>• Repeated words or pattern<br>• Includes more basic sight words<br>• Includes some word endings (e.g., s, ed, ing)<br>• Punctuation includes periods, question marks, exclamation marks, & some commas<br>• Simple dialogue<br>• Pictures are highly supportive<br>• Topics are familiar to children<br>• Focus on a single idea<br>• Setting is present, but seldom a plot |
| C | • Increased number of words and lines of text; Large spaces between words<br>• Sentences increase in length and may include some embedded clauses<br>• Sentence structure is similar to students' language<br>• Some books have repeated words or pattern<br>• Most books are about eight pages<br>• Pictures are highly supportive<br>• Includes more basic sight words and some compound words<br>• Includes word endings (e.g., s, ed, ing)<br>• Opportunities for decoding simple words<br>• Punctuation includes periods, question marks, exclamation marks, and commas<br>• Dialogue is frequently included<br>• Topics are familiar to children, esp. experiential books [events of everyday life] |

- Characters and story plots are straightforward

D

- Longer, more complex stories
- Some compound sentences conjoined by “and”
- Simple plot but may include several elaborate episodes
- Topics are familiar, but may include abstract or unfamiliar ideas
- Text layout is easy to follow, but font size may vary
- Texts range from ten to twenty pages
- Pictures begin to extend meaning of text
- New punctuation may be included (i.e., dashes, ellipses)
- Larger number of high frequency words/greater variety
- Includes more word endings, compound words, and multi-syllable words
- More opportunities for decoding words with familiar patterns

E

- Sentences include more embedded phrases and clauses
- More variety in language including some literary language
- Topics range beyond the familiar
- Genres include realistic fiction, fantasy, and nonfiction (simple informational books)
- Font size may vary; Increased number of words and lines of print
- Texts range from ten to twenty pages
- Text structure is more complex, often with several simple episodes
- More characters, but not very developed
- Moderate picture support
- Greater variety of high frequency words
- Frequent dialogue and full range of punctuation
- More multi-syllable words and less common spelling patterns

F

- Language reflects patterns that are more characteristic of written language than spoken language
- Concepts are more distant from local knowledge or the everyday world
- Some texts have abstract ideas which require discussion
- Themes emerge
- Genres include realistic fiction, human and animal fantasy, simple folktales, and nonfiction (informational
- texts)
- Text range from ten to thirty pages
- Full range of punctuation to enhance meaning
- Longer texts may have longer sentences and/or more lines of text per page and shorter texts may have

| | |
|---|---|
| | • unusual language patterns or technical words<br>• Greater variety in vocabulary |
| G | • Sentences are longer with many embedded clauses<br>• Several high frequency words which increase in difficulty<br>• Large number of decodable words with regular and irregular patterns<br>• Several episodes with a variety of characters<br>• Ideas and vocabulary are more challenging with some specialized vocabulary<br>• Story line is carried by the text<br>• Pictures support and extend meaning<br>• Readers expected to remember information and action over a longer reading time |
| H | • Language is not repetitious<br>• Full range of high frequency words<br>• Size and placement of print varies widely<br>• Some repeated episodes<br>• Content moves away from familiar experiences<br>• Genres include realistic fiction, fantasy, folktales, and nonfiction (informational texts)<br>• Characters tend to learn and change<br>• Picture support is used to enhance and extend meaning as well as arouse interest<br>• Story events require interpretation |
| I | • Multiple episodes are highly elaborated<br>• Most text lengths are about the same as G and H (10 - 30 pages) but have smaller print size; Some longer<br>• texts thirty to forty pages; Some chapter-like books<br>• Texts use a great deal of dialogue<br>• Pictures enhance meaning but provide little support for precise word solving<br>• Complex word solving is required with multi-syllable words<br>• Paragraphs and sentences are longer<br>• Readers transition to texts that my call for sustaining interest and meaning over several reading periods<br>• Most books are narrative fiction and folktales with a plot and solution<br>• Informational books are shorter with more difficult content<br>• Characters and story events require interpretation |
| J | • Stories have similar characteristics to level I but generally longer (over 50 pages)<br>• First chapter books<br>• Characters in series books will expand reading interest in reading, increasing the amount of time reading |

| | |
|---|---|
| | • Large amount of dialogue<br>• Full range of punctuation within longer, more complex sentences with many adjectives and adverbs<br>• Texts have one main plot with several episodes over a period of time – chapter books may only cover a<br>• period of one day<br>• Requires more interpretation on the part of the reader<br>• Requires quick solving of new words, including three or four syllables. |
| K | • Includes longer, slightly more complex chapter books with more characters<br>• Books have one plot, but many episodes are carried over a period of time<br>• Shorter books have more difficult vocabulary (not often used in speech by children), challenging content, or more complex themes<br>• Genres include realistic fiction, fantasy, and nonfiction (informational texts)<br>• Some fables or legends and historical fiction may be include (not requiring extensive background knowledge to understand)<br>• Large amount of dialogue used to determine what is going on in the plot<br>• Characters show various perspectives<br>• Illustrations are placed throughout the text and are used to enhance enjoyment and helps students<br>• Visualize<br>• Readers explore the various connotations of words |
| L | • Includes chapter books with fewer illustrations and complex picture books<br>• Texts contain many multi-syllable and technical words<br>• Words are used for a range of connotative meanings<br>• Print size is varied but often much smaller<br>• Most sentences end in the middle of lines and continue from one line to the next<br>• Includes a full range of genres from realistic fiction to biography<br>• More characters are speaking with dialogue not always assigned<br>• Plots and characters are more sophisticated<br>• Characters develop and change in response to events in the story<br>• Events in chapters build on each other requiring the reader to recall and keep track of information |

| | |
|---|---|
| M | • Chapter books are longer texts (60 - 100 pages) with short chapters and few pictures<br>• Informational books are shorter with new information and text features<br>• Includes a full range of genres with more biographies included<br>• Text has subtle meanings that require interpretation and background knowledge<br>• More complex and expanded plots<br>• More complex themes (i.e., respect for difference, loneliness, independence)<br>• Vocabulary may be introduced to create feeling or mood<br>• Writer's style may be clearly marked by use of words, sentence structure, descriptions of characters, or humor |
| N | • Chapter books are usually one hundred or more pages with short chapters and memorable characters<br>• Nonfiction titles are generally shorter and may present social issues<br>• Topics of informational books and settings for narratives go well beyond readers' personal experiences<br>• Complex picture books illustrate themes and build experience in character interpretation<br>• More demand on the reader to use a variety of strategies to understand plot, theme, and new vocabulary<br>• Writers use devices such as irony and whimsy to create interest and communicate the nature of characters |
| O | • Multiple characters are developed through what they say, think, and do or what others say about them<br>• Characters deal with everyday experiences and more serious problems such as war or death<br>• Genres expand to include historical and science fiction<br>• Chapter books have between fifty and two hundred pages<br>• Text have few illustrations - usually black and white drawings or photographs<br>• Highly complex sentences employ a wide range of punctuation necessary for understanding the text |
| P | • Wide variety of fiction and nonfiction<br>• Fiction texts include novels with longer chapters<br>• Characters are often concerned with issues related to growing up and family relationships<br>• Settings are very detailed<br>• Informational texts and biographies present complex ideas<br>• Topics may be unfamiliar<br>• Longer texts require readers to sustain interest and attention over several days |

| | |
|---|---|
| | • Structural complexity, theme sophistication, and necessary background experience increases |
| Q | • Wide variety of fiction and nonfiction<br>• Fiction texts include novels with longer chapters<br>• Characters are often concerned with issues related to growing up and family relationships<br>• Settings are very detailed<br>• Informational texts and biographies present complex ideas<br>• Topics may be unfamiliar<br>• Longer texts require readers to sustain interest and attention over several days<br>• More mature themes, focusing on problems of society as they affect children<br>• Texts contain difficult words to solve, often including words from other languages |
| R | • Fiction and nonfiction texts represent a range of times in history<br>• Wider variety of texts<br>• Sophisticated vocabulary requires an understanding of connotative shadings of meaning<br>• Literary devices such as simile and metaphor require background knowledge<br>• Technical aspects of texts requires background knowledge<br>• Mature themes include family problems, war, and death<br>• Readers must connect concepts and themes to political and historical events or environmental information |
| S | • Complex ideas and information<br>• Includes a wide variety of topics and cultures<br>• Paragraphs and sentences are complex requiring rapid and fluent reading with attention to meaning<br>• Requires automatic assimilation of punctuation<br>• Chapter books include all genres with many works of historical fiction and biographies<br>• Texts present settings from that are distant from students' own experiences<br>• Literary selections offer opportunities for readers to make connections with previously read texts as well as historical events |
| T | • Include a variety of genres and text structures<br>• Chapter books are long, with few illustrations<br>• Readers need to recognize symbolism<br>• Texts contain many sophisticate, multi-syllable words that readers will need to analyze in terms of both literal and connotative meaning<br>• Readers need more prior knowledge of political and historical |

| | |
|---|---|
| | events and about the problems of different culture and racial groups<br>• Themes include growing up, demonstrating courage, and experiencing hardship and prejudice |
| U | • Informational texts cover a wide range of topics and present specific technical information<br>• Illustrations require interpretation and connection to the text<br>• Narratives are complex with plots and subplots<br>• Texts have several different themes and characters<br>• Readers need to understand symbolism and themes which are more abstract<br>• Creative text formats are used |
| V | • Biographies go beyond simple narratives to provide significant amount of historical information and focus<br>• on harsh themes and difficult periods of history<br>• Science fiction presents sophisticated ideas and concepts<br>• Texts require readers to think critically<br>• Full appreciation of the texts requires noticing aspects of the writer's craft<br>• Texts have print in a small font<br>• Novels may be two hundred to three hundred pages long |
| W | • Themes explore the human condition<br>• Fiction and nonfiction text present characters who suffer hardship and learn from it<br>• Writing is sophisticated, with complex sentences, literary language, and symbolism<br>• Text have print in a small font<br>• Readers must have an awareness of social and political issues to comprehend texts<br>• Fantasy and science fiction introduce heroic characters, moral questions, and contests between good and evil<br>• Informational texts may present complex graphic information and require a whole range of content knowledge<br>• Readers must understand all the basic nonfiction organizational structures<br>• Narrative biographies include many details and prompt readers to make inferences about what motivated the subject's achievements |
| X | • Science fiction at this level incorporates technical knowledge as well as high fantasy depicting quests and the struggle between good and evil<br>• Readers are required to go beyond the literal meaning of the text to construct implied meaning by a writer's use of symbolism<br>• Continuing increase in the sophistication of vocabulary, |

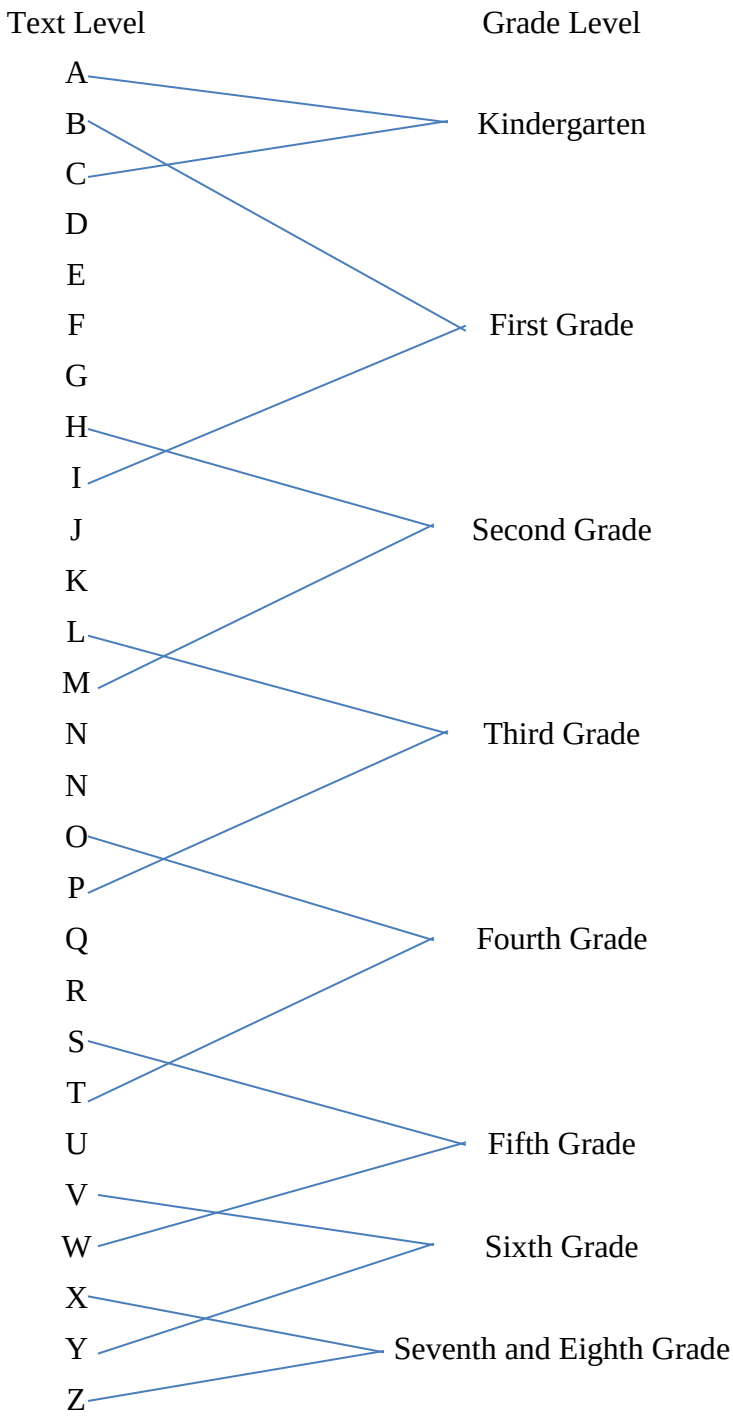
| | |
|---|---|
| | language, and topic |
| Y | • Texts have subtle themes and complex plots<br>• Include a whole range of social problems as themes with more explicit details (e.g., details about death or<br>• prejudice)<br>• Texts include irony and satire, literary devices requiring readers to think beyond the literal meaning<br>• Fantasies are complex, depicting hero figures and heroic journeys<br>• Readers required to discern underlying lessons and analyze texts for traditional elements |
| Z | • Informational books deal with controversial social concepts and political issues and include detailed historical accounts of periods less well-known<br>• Readers learn new ways of finding technical information<br>• Informational texts include complex examples of the basic organizational structures<br>• Fiction texts explore a wide range of mature themes relative to the human condition<br>• Fantasy texts present heroic quests, symbolism, and complex characters<br>• Some texts present graphic details of hardship and violence |

Adapted from:

Fountas & Pinnell. (2001). *Leveled Books for Readers Grades 3-6.*
Fountas & Pinnell. (1999). *Matching Books to Readers: Using Leveled Books in Guided Reading*.

## APPENDIX E

Fountas & Pinnell Text Level Gradient




Adapted from Guiding Readers and Writers by Fountas & Pinnell, 2001, pages 193, 228-229.

## APPENDIX F

Contingency Table Analysis
Content Knowledge Survey

| Teacher | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A-3 | SA | A | A | A | A | A | N | A | A | A | SA | A | A |
| A-2 | A | A | SA | SA | SA | A | A | SA | SA | SA | SA | SA | A |
| F-3 | SA | SA | A | A | SA | A | A | A | A | N | A | A | A |
| H-2 | SA | SA | SA | SA | SA | A | A | A | SA | SA | SA | SA | SA |
| L-3 | SA | SA | SA | A | A | A | N | A | A | A | SA | A | A |
| M-3 | SA | A | A | A | A | A | N | N | D | N | SA | A | A |
| M-2 | SA | SA | SA | SA | SA | SA | SA | SA | SA | SA | A | A | SA |
| N-2 | SA | SA | SA | SA | SA | A | A | A | A | N | SA | SA | A |
| P-2 | A | N | SA | SA | D | N | N | A | A | D | NR | N | N |
| W-2 | SA | A | A | A | A | SD | SD | N | A | D | A | A | A |

Response Key:
SA- Strongly Agree
A- Agree
N-Neutral
D- Disagree
SD- Strongly Disagree
NR- No Response

## Vitae

My name is Bridgett Gayle Niedringhaus, and I was born on July 19, 1967 in St. Louis, Missouri. I am a 1991 alumnus of the University of Missouri-St. Louis with a B.S. in Elementary Education. I earned an M.S. in Education from Lindenwood University and began my doctoral studies in 2006 at Lindenwood University. Upon graduation, I will have earned an Ed.D. in Instructional Leadership.

Currently, I am employed as an Elementary Principal in St. Charles, Missouri. Previously I have served as an administrator and teacher in St. Louis, Missouri. My professional affiliations include membership in the Association for Supervision and Curriculum Development (ASCD) and the Missouri Association of Elementary and Secondary Principals (MAESP).

As a life-long learner, it is my desire to support students by educating elementary teachers in the education profession at the college or university level. Investing in the future of our nation by educating teachers and students is my professional priority. Celebrating their success is my passion.