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A Mixed Method Analysis of Leveled Literacy Intervention with Second Grade Students in an Urban Midwest Public School

Angela Glass
Lindenwood University

A Mixed Method Analysis of Leveled Literacy Intervention with Second Grade Students in an Urban Midwest Public School

by

Angela Glass

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Dr. Lynda Leavitt, Dissertation Chair	9-28-18 Date
Dr. Carrie Schwierjohn, Committee Member	9-28-18 Date
Dr. Kevin Winslow, Committee Member	9/28/18 Date

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.

Full Legal Name: Angela Renee' Glass

Signature: Angela R. Glass Date: 9/28/18

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Abstract

Early identification and intervention for struggling readers increased the likelihood of students identified as proficient; ultimately leading to future success. The researcher sought to evaluate the Leveled Literacy Intervention (LLI) program in a Midwest urban school district, to help close the achievement gap between students' reading levels and students reading on grade level. The purpose of the study was to investigate the difference in STAR reading scaled scores between struggling 2nd grade students who received LLI and peers who did not receive LLI. The researcher also examined the possible relationship between the increase in students' literacy skills and fidelity of implementation of LLI. Finally, the researcher examined the perception of LLI teachers and School Leadership Team (SLT) members on the implementation of LLI. The researcher selected a mixed-methods approach and analyzed qualitative and quantitative data, including LLI teacher survey data, LLI teacher and SLT member interview responses, fidelity of implementation tool, and pre- and post-STAR reading scaled scores to determine a possible increase in struggling students' literacy skills. The results of the study showed no statistical difference between the LLI students and the non-LLI students. Furthermore, the study indicated no relationship existed between student outcomes and fidelity of implementation. However, the study revealed teachers who implemented LLI with fidelity, LLI teachers, and SLT members believed students' literacy skills improved. As a result, the researcher recommended further studies on the implementation of LLI in urban settings.

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Chapter One: Introduction

At the time of this writing, students, educators, and policymakers were under tremendous pressure to demonstrate reading progress and success early in a child's development. Reading was described in the literature as a fundamental life skill; yet, many students lagged in reading development at an early age and schools struggled to provide the needed support for at-risk readers (Gergersen & MacIntyre, 2014). Ritchie, Bates, and Plomin (2015) explained "early remediation of reading problems might aid not only the growth of literacy, but also more general cognitive abilities that are of critical importance across the lifespan" (p. 33).

Research indicated a high correlation between early literacy development and academic achievement, lower grade retention, higher graduation rates, and greater success in adult life (Dell-Antonia, 2012; Strickland & Riley-Ayers, 2006). The National Research Council, a leading organization in reading, indicated

> academic success . . . predicted with reasonable accuracy by knowing someone's reading skill at the end of third grade. A person who is not at least a modestly skilled reader by that time is unlikely to graduate from high school (1998, p. 21).

In addition, Fiester and Smith noted, "reading proficiently by the end of third grade (as measured by NAEP at the beginning of fourth grade) can be a make-or-break benchmark in a child's educational development" (as cited in Annie E. Casey Foundation, 2013b, p. 9). Early interventions allowed teachers to provide the support and teach the necessary skills students needed instead of waiting until the student enrolled in the upper grades where struggling students fell further behind academically and felt defeated and frustrated (Wanzek, Roberts, & Al Otaiba, 2013).

Background of the Study

Within the 15 years previous to this writing, No Child Left Behind (NCLB, 2002), emerged and the federal government held schools increasingly accountable for teaching, learning, and school improvement in reading. Hence, schools spent a high rate of funds to increase student achievement. During the 2013-2014 school year, public elementary and secondary education revenues totaled $632 billion (U.S. Department of Education, 2017, para. 1), or on average $12,460 per student (U.S. Department of Education, 2016, p. 2). Districts received funds for early intervention services through various sources, including: Title I and Part B federal funds (Jenkins, Schiller, Blackorby, Thayer, & Tilly, 2013), compensatory education state funds, special education funds, and private grants (Munson, n.d.).

According to the National Assessment of Educational Progress in Reading (NAEP, 2016), only 36% of fourth graders performed at or above the proficient level; while 64% of fourth graders performed below level (para. 1). Drummond (2014) reported approximately 10 million U.S. students had problems learning to read, but with the proper early literacy intervention, about 90% conquered previous reading difficulties (para. 1). Moreover, successful intervention programs assisted struggling readers and increased individual reading skills (Vernon-Feagans et al., 2012). Since the passing of the Individuals with Disabilities Education Act (IDEA, 2004), Response to Intervention (RTI) became the most widely recognized and implemented remediation model used in schools across America (Fuchs, Fuchs, & Compton, 2012; Jenkins, et al., 2013).

Schools across the United States implemented RTI programs to address the reading deficiencies of students (Denton et al., 2010; Hoover & Love, 2011). As of

2008-2009, all 50 states provided some form of RTI support to schools, and 70% of sampled districts started implementing RTI in reading (Jenkins et al., 2013, p. 36). RTI served as an intervention and assessment program to improve student academics and reduce undesirable behaviors through a multiple-level prevention system (U.S. Department of Education, 2010). The National Center on Response to Intervention (2010) noted,

> With RTI, schools use data to identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities or other disabilities. (p. 2)

The then-current literature described Leveled Literacy Intervention (LLI) as an intensive, short-term, early literacy intervention program for grades K through three, and addressed the needs of struggling readers (Fountas & Pinnell, 2013). LLI served as a supplement to classroom core reading instruction to improve the reading achievement of struggling students early; so, deficiencies did not turn into long-term deficits (Fountas & Pinnell, 2013). Moreover, Fountas and Pinnell (2013) designed LLI as a Tier 2 and Tier 3 intervention for RTI.

Purpose of the Study

The purpose of this study was to determine a difference in STAR reading scaled scores among 2nd grade students with reading difficulties, who received LLI, and a like group of 2nd grade students with reading difficulties, who did not receive LLI. The researcher also examined the perceptions of the LLI teachers and School Leadership

Team (SLT) members on the LLI program. Additionally, the researcher conducted observations to determine fidelity of reading implementation. The implications from the study provided the researched school district information on the implementation of LLI as an intervention program to possibly increase reading achievement among at risk 2nd grade students. The researcher utilized the following types of data collection: secondary data (STAR reading scores), a Likert survey, interview responses, and observation score/notes.

Rationale

Reading proficiency in the early grades was vital for future success in school and later in life (Annie E. Casey Foundation, 2013a; Lee & Jonson-Reid, 2016; Lesnick, George, Smithgall, & Gwynne, 2010; Workman, 2014). Research indicated the significance of focusing on the early detection of weaknesses in reading, or the student could expect an unclear future of struggling, disappointment, and desperation (Jensen & Tuten, 2012). The Annie E. Casey Foundation (2013a) "drew a link between failure to read proficiently by the end of third grade, ongoing academic difficulties in school, failure to graduate from high school on time and chances of succeeding economically later in life" (p. 3). Students, unable to become fluent readers by the end of third grade had a difficult time catching up to peers (Hernandez, 2012; Lesnick et al., 2010). In addition, students not reading proficiently by the end of third grade failed to graduate from high school on time or dropped out of school at a greater rate than proficient readers (Hernandez, 2012; Lesnick et al., 2010; Riccards, 2012). Shippen, Houchins, Crites, Derzis, and Patterson (2010) stated, "One of the most common characteristics prison inmates typically share is unsuccessful educational experiences including dropping out of

school, repeating grades, and not gaining basic literacy skills" (p. 4). "Twenty-five percent of young adults lack the basic literacy skills needed for a job" (Riccards, 2012, p. 1). Ngwudike (2010) stated, "Reading success by the fourth grade is a strong indicator of future economic prosperity of a nation, and the achievement of self-actualization" (p. 658).

Despite the importance of reading skills, on the 2015 NAEP 4th grade reading assessment, only 36% of fourth-grade students scored at proficient level or above and 69% scored at basic or above (National Assessment of Educational Progress [NAEP], 2016, para. 8). In the same year, the United States ranked 24th in reading out of the 72 countries who participated in the Program for International Student Assessment (PISA) (Organisation for Economic Co-operation and Development [OECD], 2015, p. 5). According to the Missouri Department of Elementary and Secondary Education (MODESE, 2016a), 39.3% of Missouri third-grade students scored below the proficient level on the 2016 English Language Arts Missouri Assessment Program (MAP) (para. 3). The statistics reinforced Jensen & Tuten's (2012) concern and called for action, as stated earlier.

The goal of the IDEA was to afford students with disabilities the same educational opportunity as students without disabilities (U.S. Department of Education, 2013). The reauthorization of the IDEA of 2004 changed how schools identified students for special education, expanded the focus on accountability for every student, created more versatility in services available, and established greater accountability on performance and results (Kasprzak et al., 2012; Shapiro, 2015). To support districts in providing multi-tiered, research-based interventions, Part B of IDEA provided funds to

states and districts for the implementation of early intervention programs for students needing supplementary instruction, but not yet receiving special education services (Jenkins, el al., 2013).

IDEA (2004) paved the way for RTI and became the most well-known and used intervention systems in the United State (Fuchs et al., 2012; Jenkins et al., 2013). A majority of schools, districts, and states implemented some component of RTI as a method to determine and address deficiencies in student learning (Cortiella & Horowitz; 2014; Jenkins et al., 2013). Price and Nelson (2013) noted the purpose of RTI was to assist at-risk learners by eliminating obstacles to learning. Greulich et al. (2014) explained RTI as a prevention model, developed to provide interventions for students based on individual needs. The essential components of RTI consisted of "universal screening, high-quality core instruction, progress monitoring, tiered interventions, collaborative data-based decision making, parent involvement, and administrative support" (Shapiro, 2012, p. 8). Then-current research revealed RTI as a proven model for increasing reading skills of struggling readers (Greulich et al., 2014; Robinson, Bursuck, & Sinclair, 2013; White, Polly, & Audette, 2012).

Evidence revealed early intervention programs decreased the number of students with reading deficiencies (Partanen & Siegel, 2014). Previous studies indicated students who received LLI made significant growth on the Gates-MacGinitie Reading Test (Harrison et al., 2008; Peterman, Grehan, Ross, Gallagher, & Dexter, 2009). Further, researchers found students enrolled in LLI performed at a higher level, based on the Fountas and Pinnell Benchmark Assessment System. However, the studies conducted took place in rural and suburban school districts. Therefore, Ransford-Kaldon et al.

(2013) conducted a similar study in an urban school district and found kindergarten through second grade students who received LLI progressed more on the Fountas and Pinnell Benchmark than the students who did not receive LLI. However, the study found inconclusive results when comparing both groups' STAR reading scores (Ransford-Kaldon, 2013).

The researcher conducted the study in a large urban public-school district located in the Midwest. In 2016-2017, the researched district decided to implement LLI in Kindergarten through third grade, as a pull-out reading intervention to help increase the reading level of struggling readers. The researched school district utilized STAR reading scaled scores to measure the growth of students' reading levels.

Research Questions and Hypotheses

The researcher examined the following two hypotheses and two research questions:

Hypothesis 1: There is a difference in the individual STAR reading scaled score gained in 2nd grade students with reading difficulties who participate in LLI and 2nd grade students with reading difficulties who do not participate in LLI, as measured by pre-and post-scores on STAR reading assessment.

Hypothesis 2: There is a relationship in the mean STAR reading scaled score gain in 2nd grade students with reading difficulties and the fidelity of implementation mean observation score.

Research Question 1: How do Leveled Literacy Intervention teachers perceive Leveled Literacy Intervention?

Research Question 2: How do SLT members perceive Leveled Literacy Intervention?

Limitations

Limitations for this study consisted of characteristics outside the control of the researcher which could have influenced the outcomes of the study. The study's limitations included the number of LLI lessons students received, reading instruction received in regular classroom, and collection of data from surveys and interviews.

Fountas and Pinnell (2012) recommended students receive 18 weeks of intervention (para. 6). One limitation to the study was all research participants did not receive the same number of LLI lessons, nor did all students receive 18 weeks of intervention. Although the researcher's original design included an 18-week period, the number of lessons varied due to student absences, teacher absences, the unavailability of students or teachers during LLI time, assessment windows, a delay in starting LLI, and holidays.

A second limitation to the study was the use of a purposive sample in which only the LLI teachers and SLT members participated in the survey and interview components, which resulted in a low response rate, the percentage of individuals who decided to participate in a survey (Johnson & Wislar, 2012). According to Halbesleben and Whitman (2013), "Nonresponse bias is a systematic difference between those who respond and those who do not respond on a substantive construct measured by a survey" (p. 914). If non-response bias occurred, Halbesleben and Whitman (2013) noted the conclusions one deducted from the data may not portray the population. Therefore, response and non-response biases in a study created a study limitation (Johnson &

Wislar, 2012). Furthermore, the data from the surveys and interviews were contingent upon the integrity of the participants' responses to survey and interview questions.

The final limitation emerged from the reading instruction students received from the classroom teacher. The school district provided the classroom teachers with the curriculum framework and scope and sequence for 2nd grade English Language Arts instruction. Although the district established guidelines, schools and teachers had the autonomy to interpret the guide. Therefore, implementation of the core reading instruction depended on the classroom teacher. As suggested by Fountas and Pinnell (2012):

> If we are serious about high literacy achievement, then we must be certain that our classroom materials offer the richest learning opportunities possible, and our teachers are provided the opportunity to cultivate professional growth that supported them in delivering highly effective instruction. (p. 5)

In addition, teachers employed, at the researched school district, received a wide range of reading professional development specifically related to rigor in instruction and teacher classroom practices. While the specific facets of instruction played a vital part in student achievement, the researcher was unable to account for all variables in the study.

Definition of Terms

Academic achievement: Performance outcomes indicated the degree in which a student accomplished goals based on activities in school (National Conference of State Legislatures, 2012).

Benchmark assessments: Standardized assessments administered throughout the school year. Educators used the assessments to gain information regarding changes in

students' learning and to identify areas of students' strengths and weaknesses to provide students with instruction needed to improve student outcomes (Konstantopoulos, Li, Miller & van der Ploeg, 2016).

Common Core State Standards: A set of English language arts and mathematic standards students should master by the end of each grade level to be successful in college, career, and life (Common Core State Standards Initiatives [CCSSI], 2018).

Computer-Adaptive Testing: A computer-based assessment adjusted by the level of difficulty on questions, based on student's response. If the response is correct, the following question will be harder; if the response is incorrect, the following question will be easier. "Computer-adaptive tests represent an attempt to measure the abilities of individual students more precisely, while avoiding some of the issues often associated with the 'one-size-fits-all' nature of standardized tests" (Great Schools Partnership, 2014, para. 1).

Fidelity of implementation mean observation score: Fidelity of implementation refers to the degree to which LLI was implemented as intended by Fountas and Pinnell (2011a, 2011b, 2013). For the purpose of the study, the Fidelity of Implementation Tool was used to rate the LLI teacher's fidelity to the LLI program. The LLI teachers were rated based on a four-point scale ranging from zero (No evidence) to four (Fidelity). The mean observation score was calculated, resulting in a fidelity of implementation mean observation score between zero and four.

Fluency: Words recognized rapidly so readers comprehend the text read. (National Institute of Child Health and Human Development [NICHD], 2000).

Intervention: Small group instruction to address specific academic concerns when a student is not performing on level from regular classroom instruction. The intervention has a clear-cut number of sessions, frequency, and duration (Averill, Baker, & Rinaldi, 2014).

Leveled Literacy Intervention System: An intervention program created by Fountas and Pinnell (2011a, 2013), designed to provide daily, small-group instruction, with the purpose of helping students who struggle with reading and writing. Trained specialists taught the LLI scripted lessons and leveled text (Fountas & Pinnell Literacy, 2017).

Missouri Learning Standards: A set of student grade level skills in the state of Missouri. These standards follow the Common Core State Standards (CCSS) (Missouri Department of Elementary and Secondary Education [MODESE], 2016a).

Phonemic awareness: The "ability to understand that spoken words are made up of separate units of sound that are blended together when words are pronounced" (NICHD, 2000, p. 4).

Phonics: Established set of rules indicating the relationship between letters in the spelling of words and the sounds of spoken language (NICHD, 2000).

Progress monitoring: A practice used to assess students' academic performance or progress, to gauge the effectiveness of instruction, and to make informed instructional decisions using data (Hughes & Dexter, n.d.).

Reading comprehension: The process a reader used to process text accurately by connecting the words read to information the reader already knows to understand the text (NICHD, 2000).

Reading difficulties: For the purpose of this study, a break down in the reading process, causing an inability for the student to read with ease.

Response to Intervention (RTI): A three-tiered framework "uses data-based decision making that employs screening and progress monitoring data to prescribe supplementary interventions for students who do not respond to core instruction" (McInerney & Elledge, 2013, p. 3).

Scaled score: The student's raw score; the total number of correctly answered questions, converted to a standardized scale. Scaled scores compared "student performance across grade levels" (Renaissance Learning, 2015, p. 121). The STAR Reading scaled scores ranged from 0 to 1400.

School Leadership Team: A group of educators who meet and discuss school issues with the purpose of increasing student achievement. The SLT evaluated school performance data and classroom observation data to determine the needs of the school. For the purpose of this study, members of the SLT included the principal, assistant principal, and academic instructional coach within the research setting.

Standards: A set of expectations, developed by states, for which students should be able to demonstrate proficiency, by the end of each grade (K-12), for each subject area to graduate from high school as students prepared for college, careers, and training programs (CCSSI, 2018).

STAR reading: A computer-adaptive assessment tool used to screen and progress monitor reading skills for students in grades K-12 (Renaissance Learning, 2015).

Struggling reader: For the purpose of this study, a student in need of intensive support to attain grade-level reading proficiency.

Vocabulary: Words people need to understand to communicate with others (NICHD, 2000).

Summary

The researcher aimed to close the gap found within the then-current literature by examining a difference between 2nd grade students with reading deficiencies receiving LLI and a like group of 2nd grade students receiving core reading instruction in an urban Midwest school district. Consequently, the results proved useful to schools in determining the future of implementing LLI as a reading intervention during the RTI process.

Chapter One detailed the background and purpose, explained the rationale for this study, introduced hypotheses and research questions, described the limitations, and defined terminology. Chapter Two provides a review of the literature on the historical background of reading, students at-risk of reading failure, reading interventions, RTI, LLI, Star Reading, and online assessment in reading. Chapter Three describes the methodology, participants, and the data collection process, as well as the research tools used in the study. Chapter Four discusses the statistical methods used in the study and presents the results of the data for the hypotheses and research questions; and finally, Chapter Five describes the key findings from the research, as well as conclusions and recommendations for future research.

Chapter Two: The Literature Review

Introduction

The researcher examined the implementation of LLI in a large urban school district and the LLI teachers and SLT members' perceptions of the program. To gain a thorough understanding of the topic, the researcher conducted a comprehensive review of the literature on reading difficulties among struggling readers and early literacy intervention. Chapter 2 provided an in-depth review of the existing literature about research and implications related to early literacy, key studies, and work of early childhood reading researchers. The literature review included educational reform which influenced practices in public schools, early literacy strategies, components of reading, RTI, LLI, data-driven instruction, and high stakes testing.

Educational Reform

For decades, federal and state policy makers introduced educational reforms intended to improve perceived educational inadequacies. In 1965, President Lyndon Johnson, a former teacher, signed the Elementary and Secondary Education Act (ESEA) because of increased poverty and inequity in the United States educational system (El Moussaoui, 2017). The law considerably changed education and represented a landmark of federal government commitment to students' equal opportunity and increased federal control and funding (Malin, Bragg, & Hackmann, 2017). ESEA accomplished two essential objectives: allocated funds to disadvantaged students through Title 1 and provided grants to state education departments to build competency, resulting in an increase in federal involvement in education (Egalite, Fusarelli, & Fusarelli, 2017). Since the enactment, the government reauthorized the ESEA eight times, including the No

Child Left Behind Act of 2001 (2002) and, most recently, as Every Student Succeeds Act (ESSA) of 2015; however, the goal remained the same: improved educational opportunities and academic achievement for all children.

No Child Left Behind. Pressure from business and political leaders to formulate an accountability policy intensified in the 1980s after the released report *A Nation at Risk*, issued by the National Commission on Excellence in Education, indicated how American high school students underperformed on international tests (U.S. Department of Education, 1983). In 2002, President George W. Bush reauthorized the ESEA and signed into law the NCLB Act; which transferred much of the decision-making and resource allocation from the states to the federal government and required states and school districts to meet federal adequate yearly progress (AYP) in reading and mathematics to maintain federal Title 1 funds (Dee, Jacob, & Schwartz, 2013; Editorial Projects in Education Research Center [EPERC], 2015; El Moussaoui, 2017; No Child Left Behind [NCLB], 2002; Pruitt & Bowers, 2014; Shanahan, 2014). The purpose of NCLB was to increase student achievement, advance American competitiveness (Pruitt & Bowers, 2014), and decrease the achievement gap between low-income and minority students and more advantaged peers (EPERC, 2015). Additionally, NCLB required all students to reach mastery in mathematics and reading by the year 2014 (Husband & Hunt, 2015; NCLB, 2002). Failure of school districts not meeting AYP for two consecutive years or more led to strict consequences such as terminating staff, assuming control over the school boards, or closing schools all together (Biegel, Kim & Weiner, 2016). School districts met AYP by having proficient scores according to individual state standards and by disaggregated student population groups, which included race/ethnicity,

limited English proficient students, economically disadvantaged, and students with disabilities (Dee, et al., 2013; EPERC, 2015; NCLB, 2002; Pruitt & Bowers, 2014). After the passage of NCLB of 2001, high-stakes testing and a federally regulated framework of school accountability for continued failure to meet state accountability made it one of the most disputed federal reform policies in American educational history (Heck & Chang, 2017).

Although, NCLB, known for its unprecedented role of the federal government holding schools accountable for student achievement, included four key components (Husband & Hunt, 2015). The law required states to submit an accountability plan, along with state annual assessments to the U.S. Department of Education. Further, NCLB mandated states to establish benchmark targets and review the advancement of schools and districts funded by Title 1 (Husband & Hunt, 2015; Shanahan, 2014). A second key component of NCLB allowed states, school districts, and schools greater autonomy in spending federal dollars to address individual school improvement needs (Husband & Hunt, 2015). A third component of NCLB provided parents of children in low-performing schools the choice of attending a better performing school within the district or to a charter school (Husband & Hunt, 2015). The last key component of NCLB stipulated teachers use 'scientifically based research' for all federally funded programs, Title 1 instruction and professional development (U.S. Department of Education, 2002). Over the past decade and a half, supporters and critics argued the outcomes of NCLB.

Supporters of NCLB. NCLB was not perfect, yet not totally flawed either. In hindsight, supporters credited NCLB with creating high-stakes test school accountability throughout the nation, emphasizing meeting end-of-year state performance targets,

decreasing achievement gaps amongst sub-groups, and developing school status by providing funds (Dee et al., 2013). The results from the 2012 NAEP long-term trend assessments found 9- and 13- year old students made higher gains in reading and mathematics in 2012 than students the same age in the early 1970's, but no significant growth in reading or mathematics of 17-year old students as seen in Figure 1 (Hatalsky & Johnson, 2015). Although White students average reading scores remained higher than Black and Hispanic students in 2012, the White – Black and White – Hispanic academic reading gaps narrowed for the 9, 13 and 17-year-old students (National Center for Education Statistics [NCES], 2013, p. 2). Additionally, the National Center for Education Statistics (NCES, 2013) reported, female students continued to outscore male students at age 9, 13, and 17; the reading score gap narrowed at age 9 in 2012 (p. 2). The lack of consistent data caused considerable dispute amongst policymakers and educators concerning whether NCLB accomplished its goals (Dee et al., 2013; Pruitt & Bowers, 2014).

Critics of NCLB. Critics of NCLB complained teachers felt discredited and deprived of professional status (Husband & Hunt, 2015). To comply with state and federal mandates, the focus on core scripted instructional programs increased and school districts discouraged teachers from adapting and modifying instruction to best meet students' needs (Dewitz & Jones, 2013). Low-income schools used these curricula more with the promise of increased student achievement on standardized assessments (Dewitz & Jones, 2013), yet little evidence showed shifting to fidelity of core instruction would increase student achievement or close the achievement gap between disadvantage students and more advantaged peers (Allington, 2013).

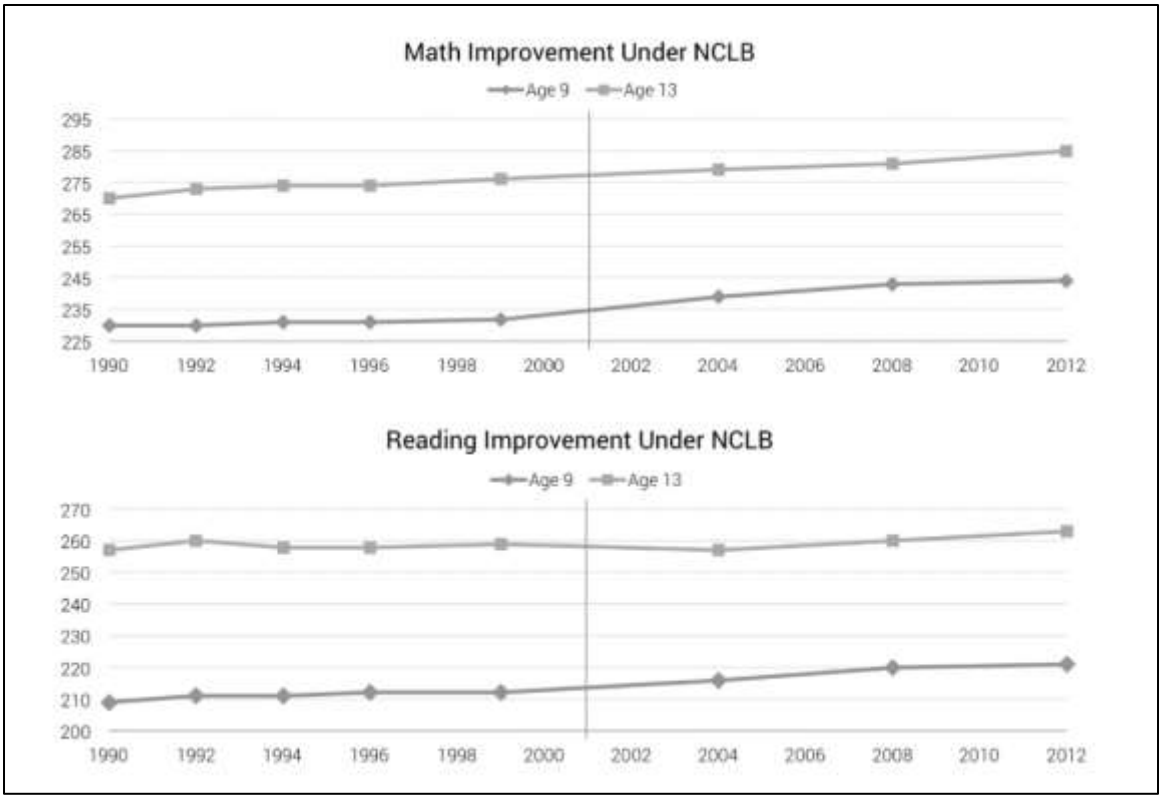

Figure 1. Trend in NAEP reading average scores for 9, 13, and 17-year-old students. Reprinted with permission from (Hatalsky & Johnson, 2015, para. 5). See Appendix A.

Under NCLB, schools evaluated teachers based on the ability to implement the core with fidelity and the percentage of students who scored proficient on state tests regardless of the progress those students showed during the school year (Afflerbach, 2016). Not only did school districts ignore teacher's expertise, teachers shifted professional development from developing teacher competency as adaptive decision makers with deep knowledge of teaching and learning to implementing curricula with fidelity (Dennis, 2016). Therefore, Husband and Hunt (2015) found NCLB precipitated more teachers to leave the field of education because the law caused the "devaluing [of] their professional knowledge base and skills" (p. 220) and threatened teachers' professional discretion. Dennis (2016) suggested, NCLB relied too much on the end-of-year state assessment scores, resulting in punitive measures against teachers and students.

Curriculum publishers earned billions of dollars during NCLB era selling core curriculum and supplemental materials to schools across the nation (Dennis, 2016). Considering no one core program met the needs of all students; curricula failed many students, and generally the students who needed expert teaching the most suffered (Allington, 2013). Additionally, Allington (2013) noted increased assessments mandated by NCLB yielded a negative outcome in the teaching and learning environment of students in high-poverty schools. Likewise, teachers in low-income schools relinquished individual autonomy and professional identity (Husband & Hunt, 2015).

Every Student Succeeds Act (ESSA). On December 15, 2015, President Barack Obama signed Every Student Succeeds Act, the reauthorization of the 50-year-old ESEA a replacement to the predecessor, NCLB (Brenner, 2016, Dennis, 2016; Egalite et at., 2017; Zinskie & Rea, 2016). The ESSA renounced the excessive use of standardized testing and universal mandates for schools, ensured all students graduate from high school prepared for college and the workforce, and offered more children the opportunity to attend a quality state-funded preschool education (U.S. Department of Education, 2018). During the signing of the ESSA, President Obama stated, "this bill makes long-overdue fixes to the last education law, replacing the one-size-fits-all approach. It creates real partnerships between the states, which will have new flexibility to tailor their improvement plans, and the federal government" (The White House, 2015, para. 15).

While not a total transformation from NCLB, ESSA allowed states more responsibility over education policy, particularly accountability assessments, and decreased government mandates (U.S. Department of Education, 2015; Zinskie, & Rea,

2016). ESSA maintained NCLB's mandate of states to annually test students in Grades 3 to 8 and once in high school (Brenner, 2016; Egalite et al., 2017) and continued the requirement for school districts to report academic performance by demographic subgroups (ESSA, 2015). In addition to the historically identified subgroups: race/ethnicity, socioeconomic status, disability, gender and English language learners, ESSA added three additional subgroups for reporting purposes only: homeless, students in foster care, and students with a parent in the military (Association for Supervision and Curriculum Development [ASCD], 2015; Zinskie, & Rea, 2016). However, under the new law, states determined achievement goals (El Moussaoui, 2017). In addition to academic performance, ESSA required states to use at least one other non-academic criterion such as individual student growth, attendance, high school graduation rates, school climate, student engagement, or any other indicator used to assess school or student success (ASCD, n.d.; Darling-Hammond et al., 2016; El Moussaoui, 2017; Egalite et al., 2017; Zinskie & Rea, 2016). According to Cook-Harvey, Darling-Hammond, Lam, Mercer, & Roc (2016), "Carefully chosen measures can help shine a light on poor learning conditions and other inequities" (p. v). Furthermore, Elgart (2016) indicated multiple measures provided a more comprehensive perspective of schools and the students. In contrast, Schanzenbach, Bauer, and Mumford (2016) questioned the use of social-emotional indicators to measure accountability considering assessment was normally based from a self-report inventory. However, researchers reported non-cognitive indicators such as attendance was a more conclusive and comparable way to measure school success (Schanzenbach, Bauer, & Mumford, 2016).

ESSA ended the government's involvement in determining and regulating teacher licensing, teacher evaluation systems and defining teacher effectiveness (ESSA, 2015). Most remarkably, ESSA no longer required states to create teacher evaluation systems based considerably on students' test results, which was a key element of the ESEA federal flexibility waivers (Darling-Hammond et al., 2016; ESSA, 2015; U.S. Department of Education, 2018). Prior to ESSA, government and school districts accentuated data compliance and data punishments; however, ESSA focused more on growth, not sanctions (Elgart, 2016). O'Day and Smith (2016) also recommended school districts and schools not just focus on test results to reach end of the year state requirements; rather concentrate on steady progress.

ESSA expanded upon NCLB's requirement of evidence-based interventions by broadening the limited scientifically based research design (Darling-Hammon et al., 2016) and prescribed different kinds of research evidence approved when selecting an activity, strategy, or intervention devised for advancement (Darling-Hammon et al., 2016). Additionally, ESSA required states, school districts, and schools to choose evidence-based activities, strategies, or interventions (Zinskie & Rea, 2016). Section 8101(21) (A) of the ESSA defined an activity, strategy, or intervention as evidence-based when there is evidence of "a statistically significant effect on improving student outcomes or other relevant outcomes based on *strong evidence*…. from an experimental study, *moderate evidence*…. from a quasi-experimental study, or *promising evidence*…. from a correlational study" (p. 290-291). In addition, an evidence-based activity, strategy, or intervention has a "rationale based on high-quality research findings or positive evaluation…that is likely to improve student or other relevant outcomes and that

includes ongoing efforts to examine the effects of such activity, strategy, or intervention" (p. 291).

Early Literacy

A report by the National Reading Panel (2000) categorized precursor competencies into five areas critical for reading instruction: phonemic awareness, phonics, fluency, vocabulary, and comprehension; which revived interest in proven practices for early literacy (Brown, 2014). Ellery (2014) suggested students must develop all five components early to become competent and proficient readers later. Brown (2014) recommended students followed a sequence to learning how to read: print awareness to phonological and phonemic awareness to phonics and recognizing words. Stancel-Piatak, Mirazchiyski & Desa (2013) explained early literacy as stepping stones for future success in school.

In addition to the five components of reading skills needed for reading success, Cervette and Hiebert (2015) recommended adding knowledge development as a sixth component. Researchers found readers with more knowledge of the subject matter of a text made less mistakes during oral reading and made higher quality miscues, without a change of meaning in the text, when errors occurred (Priebe, Keenan, & Miller, 2012). Developers of the Common Core Reading Standards (K-5) also identified foundational skills students needed to master and become proficient readers: print concepts, phonological awareness, phonics and word recognition, and fluency (National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010a). Although the Common Core Foundational Skills did not specifically

identify vocabulary and comprehension as a key component of reading instruction, the foundational skills became the focus of the CCSS (Brown, 2014).

Wanzek et al. (2013) noted, from kindergarten through third grade, students learned to read; while from third grade up, students read to learn. Students unable to read at grade level fell further behind peers academically and continued to fall with each passing grade (Brown, 2014; Kaminski, Powell-Smith, Hommel, McMahon, & Aguayo, 2015; Stancel-Piatak, Mirazchiyski, & Desa, 2013; Vagi, Collins, & Clark, 2017). Additionally, students proficient at reading by the third grade were more on track to graduate from high school (Hernandez, 2012). Given the important role early literacy contributed to student's academic success, policymakers focused and created policies connected to early literacy. Many states mandated schools to retain students who did not demonstrate reading proficiency by the end of third grade (Jacob, 2016).

Gilbert et al. (2013) stressed the significance of early identification with students at risk for reading failure to provide early and pertinent intervention and to avoid additional reading deficiencies. Students exposed early to print and literacy skills benefited academically in the future and developed as proficient readers (Sparks, Patton, & Murdoch, 2014). Similarly, Wanzek, Roberts, Otaiba, and Kent (2014) noted for many kindergarten students at risk of reading failure, quality, and early reading instruction improved reading achievement led them on a positive reading path.

The Essential Components of Reading

In 1997, the National Reading Panel (NRP), convened by the U.S. Congress to evaluate the efficacy of different methods to teaching students to read and published a report in 2000 with the panel's conclusions pertinent to reading development and

instruction (NICHD, 2000). In the final report, the NRP identified five critical components essential to reading instruction: phonemic awareness, phonics, vocabulary, fluency, and comprehension (NICHD, 2000). The NRP's research and findings remained widely accepted as crucial areas for reading instruction (Cassidy, Valadez, & Garrett, 2010) and continued to be necessary skills for readers to master (Calkins, Ehrenworth, & Lehman, 2012). The NCLB and Reading First initiative incorporated the five essential reading components

Phonemic Awareness. Educational researchers described reading in the literature as an intricate and multifaceted process. Research indicted many students struggled with learning to read because of the complexity of phonemic awareness (National Early Literacy Panel [NELP], 2008; NICHD, 2000; Shanahan & Lonigan, 2013). Phonemic awareness, a sub-skill of phonological awareness, referred as the ability to discriminate the smallest unit of sound in language, was the foundation for identifying printed words (Brown, 2014; Del Campo, Buchanan, Abbott, & Berninger, 2014; Kenner, Terry, Friehling, & Namy, 2017; Stanovich, 2000). Ehri, Nunes, Stahl, and Willows (2001) described phonemic awareness as a component of phonological awareness and the ability to recognize individual sounds, identify and manipulate phonemes. Brown (2014) stressed students who struggled with discriminating phonemes of spoken language will have difficulty when relating phonemes to graphemes, a letter or a group of letters representing a sound, in written language.

Over the past forty years, researchers agreed phonemic awareness was the strongest predictor of decoding words, word recognition, and comprehension (Del Campo, Buchanan, Abbott, & Berninger, 2014; Kenner et al., 2017; Melby-Lervag,

Lyster, & Hulme, 2012; NELP, 2009; NICHD, 2000; Shanahan & Lonigan, 2013). According to the research conducted by the National Institute of Child Health and Human Development (2003) and the National Reading Panel (2000), students learned phonemic awareness more successfully when instruction was based on manipulating only one or two types of phonemes and when taught to manipulate phonemes by using the letters of the alphabet. Moreover, the National Reading Panel (2000) identified six tasks used to teach student's phonemic awareness: isolation, categorization, identity, blending, deletion, and segmentation. Students became better readers from teachers trained to understand how students developed phonemic awareness and were intentional about which phonemic awareness skills to teach, and in what order (Carson, Gillon, & Boustead, 2013; Vesay & Gischlar, 2013). Callaghan and Madelaine (2012) noted schools must provide preschoolers early intervention and deliberate instruction in phonemic awareness to start kindergarten with the reading skills needed to likely become a successful reader.

Phonics. The National Reading Panel Report (2000) noted the importance of phonics instruction for the development of early reading. Scarborough and Brady (2002) defined phonics as "an approach to, or type of, reading instruction intended to promote the discovery of the alphabetic principle, the correspondences between phonemes and graphemes, and phonological decoding" (p. 20). Brown (2014) described phonics as the understanding of the link between sounds and print letters and recognized phonics as the onset of conventional reading.

Phonics instruction, designed for beginning readers in early literacy development and students struggling to learn how to read, varied in the instructional approach

(NICHD, 2000). Similarly, many researchers agreed phonics instruction taught students the alphabetic writing process, fundamental for reading and spelling (Ehri, 2014; Rayner, Foorman, Perfetti, Pesetsky, & Seidenberg, 2001). According to Ehri (2005), phonics and word study described strategies used to improve student's skill to recognize words and decode text. The primary focus of phonics instruction was to teach students the relationship between letters and sounds, how to master the written language by understanding the letters of the alphabet which symbolized oral language in writing, how to identify words automatically, and the process of blending sounds to read and chunk words into sounds (NICHD, 2000). In a like manner, Armbruster, Lehr, and Osborn (2003) added understanding the relationships between letters and sounds assisted students in quickly recognizing familiar words and decoding new words.

According to Brady (2011), phonics instruction varied among several elements, including the extent of explicitness, generality, and intensity. Synthetic phonics programs taught students letter-sound correspondence and blending techniques (Bowey, 2006; NICHD, 2000). Price-Mohr and Price (2017) suggested synthetic phonics was a step-by-step evaluation of words instead of whole word recognition and probably more appropriate for students who used analytical strategies. The National Reading Panel (2000) concluded synthetic phonics programs and other systematic phonics approaches were "significantly more effective than non-phonics approaches in promoting substantial growth in reading" (p. 93). In contrast, with analytic phonics students identified the whole words and then broke the words down to analyze and compare components of the word to letter-sound correspondence, onsets and rimes, and phonemes (NICHD, 2000; Wyse & Styles, 2007) time to practice examining the spelling of words. A study

conducted by Johnston and Watson (2004) found the synthetic phonics groups out-performed the analytic phonics group, despite the students in the synthetic phonics group were from more disadvantaged backgrounds.

Fluency. Research described decoding and fluency skills as necessary foundational components for vocabulary and comprehension (Knight-McKenna, 2008; Pikulski & Chard, 2005; Whitaker, Harvey, Hassell, Linder, & Tutterrow, 2006). Rasinski, Blachowicz, and Lems (2012) described fluency as recognizing words expeditiously and correctly, as well as using phrasing, intonation and expression to sound like naturally spoken language. In other words, Tompkins (2010) defined fluency as "reading smoothly, quickly, and with expression" (p. 146). Previous researchers understood fluency to mean rapid word recognition and allowed fluent readers to focus less on word recognition and more effort on comprehending the text (Learning Point Associates, 2004). Whereas, later studies of fluency (Hooks & Jones, 2002; Rasinski, 1990; Rasinski, Blachowiez, & Lems, 2012) broadened the understanding by noting fluency also involved chunking groups of words within a sentence into meaningful phrases to comprehend the text.

Similarly, Brown (2014) identified fluency as the "bridge" connecting decoding and comprehension. The National Reading Panel's Report explained the relationship between fluency and comprehension, "for the non-fluent reader, difficulty with word recongnition slows down the process and takes up valuable resources that are necessary for comprehension. Reading becomes a slow, labor-intensive process that only fitfully results in understanding" (2000, p. 3-8).

Garwood, Ciullo, and Brunsting (2017) indicated, fluency contributed to reading comprehension because students capable of reading fluently spent less time decoding unknown words. Numerous studies documented reading fluency as a predictor of reading comprehension and emphasized the importance of tracking student's fluency skills (Abbott, Wills, Miller, & Kaufman, 2012; Fuchs et al., 2001; Klauda & Guthrie, 2008; Kim, Petscher, Schatschneider, & Foorman, 2010; Li & Wu, 2015; Neddenriep, Fritz, & Carrier, 2011; Wise et al., 2010). Although researchers have agreed the development of fluency in early readers contribute to comprehension, research also has shown a strong correlation between fluency and comprehension in students in upper-elementary and secondary grades (Paige, Rasinski, & Magpuri-Lavell, 2012; Rasinski, Rikli, & Johnston, 2009).

Vocabulary. The National Reading Panel (2000) identified vocabulary as necessary skills students needed to enhance reading achievement. Muter, Hulme, Snowling, and Stevenson (2004) defined vocabulary as "the ability to understand the meanings of individual words" (p. 665). Armbruster, Lehr, and Osborn (2001) described reading vocabulary as words one recognized or used in text. Furthermore, Thompkins (2010) noted vocabulary as "knowing the meaning of words that influences comprehension, because it is difficult to understand when the words being read do not make sense" (p. 146). The Learning Point Associates (2014) identified listening, speaking, reading, and writing as four types of vocabulary; while listening and speaking vocabularies were commonly known collectively as oral vocabulary.

Kamil et al. (2008) and Loftus and Coyne (2013) agreed both oral and written vocabulary knowledge was critical for students' academic success and vocabulary

development needed to increase with time to ensure students comprehended more complex text. Weiser (2013) noted vocabulary knowledge helped activate and build background knowledge, improved fluency and reading comprehension, increased writing skills, and developed knowledge of unknown word meanings based on root words, suffixes, prefixes, and word families. Vocabulary played a significant part in comprehension, word recognition, and for students reading to learn as well as learning to read (Learning Point Associates, 2014). Additionally, Nagy and Scott (2000) believed students must understand the meanings of words read to learn from reading.

Based on its extensive review of reading research, The National Reading Panel (2000) recommended teachers teach vocabulary to students both directly and indirectly. Direct vocabulary instruction included teaching new words by providing students with precise definitions and practical examples and nonexamples prior to reading the text; whereas indirect vocabulary instruction comprised of teaching word-learning strategies to help students learn how to infer word meanings from the context independently (Learning Point Associates, 2014; NICHD, 2000; Weiser, 2013). While directly teaching vocabulary was described as critical, teachers grappled with identifying which vocabulary words to teach, given the vast amount of words in the English language (Beck, McKeown, & Kucan, 2013). Khamesipour (2015) agreed both direct and indirect vocabulary instruction increased student vocabulary and only teaching vocabulary explicitly did not improve student vocabulary. Damhius, Segers, and Verhoeven (2014) concurred both direct and indirect vocabulary instruction increased vocabulary knowledge; however, believed direct instruction alone improved vocabulary development.

Comprehension. Although researchers and educators used the term comprehension in numerous ways, many agreed reading comprehension developed from a logical mental representation of the text (Hall & Barnes, 2017). In the mental representation, readers successfully connected words and ideas from the text based on both the author's text and the reader's background knowledge (Armbruster, Lehr, & Osborn, 2001; Learning Point Associates, 2014; Tompkins, 2010). According to Vaugh and Swanson (2015), reading comprehension depended on readers knowing words in the text, content of the text, and the ability to make meaningful inferences of the text. Hall and Barnes (2017) noted, readers made inferences by determining relevant connections between information stately directly in the text and between information directly stated in the text and the background knowledge of the reader.

Comprehension required multiple skills developed simultaneously (Cutting & Scarborough, 2006; Vellutino, Tunmer, Jaccard, & Chen, 2007) such as decoding (Christ & Wang, 2010), vocabulary (Christ & Wang, 2010; Verhoeven & van Leeuwe, 2008), and syntactic and semantic processing (Cutting & Scarborough, 2006, Oakhill & Cain, 2011; Torgesen, 2002). The National Reading Panel (2000) reported reading comprehension was a complex process in which readers needed to clearly understand the vocabulary in the text to comprehend the text read. In addition, reading comprehension was depended upon higher-level mastery functions (Cain, 2006; Christopher et al., 2012), in which working memory served as the main predictor in children (Cain, Oakhill, & Bryant, 2004).

The main goal of reading instruction was comprehension (Learning Point Association, 2014). Hattie (2009) examined 138 different influences on student

achievement and ranked comprehension programs as number 28 with an effect size of d = 0.58 (p. 297). Teachers found teaching text structure, asking rigorous questions, and teaching academic vocabulary words increased students' reading comprehension (Vaughn & Swanson, 2015). Individuals within the research literature found when teachers used explicit instruction, which included demonstrating, explaining, modeling, and guided practice in teaching students how to comprehend a text, students' reading comprehension improved (Butler, Urrutia, Buenger, & Hunt, 2010; Cantrell, Almasi, Carter, Rintamaa, & Madden 2010; Gregory & Cahill, 2010; Mahdavi & Tensfeldt, 2013; NICHD, 2000). Studies by Guthrie et al. (2004) and Van Keer and Verhaeghe (2005) found teachers who used several instructional strategies developed more strategic readers and increased students' reading comprehension.

With the adoption of the CCSS (2018), research-based comprehension strategies became a crucial component of reading instruction in schools across the United States (Kuhn, Rausch, McCarty, Montgomery, & Rule, 2015). Moreover, vocabulary and comprehension were the central focus of the College and Career Readiness Anchor Standards and the grade-specific K-12 CCSS (2018) standards, therefore, integrated across the four Common Core strands: Reading, Writing, Speaking and Listening, and Language (Brown, 2014). Correia (2011) noted, by integrating informational text in the early grades, students built the foundation for the comprehension skills needed to meet the CCSS (2018) and helped students to develop the literacy skills needed to comprehend more complex nonfiction text in later grades. The CCSS expected students to "read and comprehend complex literary and informational texts independently and proficiently" (CCSSI, 2018, para. 11), "make logical inferences", and "cite specific textural

evidence…to support conclusions drawn from the text" (CCSSI, 2018, para. 2). In other words, the CCSS expected students to make both text-connecting and knowledge-based inferences to identify cause and effect, draw conclusions, and infer significant relationships from the text (Hall & Barnes, 2017).

Proven Strategies

Wayman, Spring, Lemke, and Lehr (2012), identified the following 12 primary strategies administrators used during data meetings to inform instruction in schools; (1) ask the right questions; (2) communication; (3) data system support; (4) distributing leadership; (5) engaging in personal learning opportunities; (6) ensuring adequate professional learning opportunities; (7) facilitating collaboration around data; (8) focus data on larger context; (9) fostering common understanding; (10) goal-setting; (11) modeling data use and (12) structuring time to use data (p. 37). However, results indicated schools frequently only used four of the strategies in the study: (1) focus data on larger context; (2) facilitating collaboration around data (3) distributing leadership and (4) fostering common understanding (Wayman, Spring, Lemke, & Lehr, 2012, p. 39).

Research described data as useful when educators looked at the student as a whole and focused on multiple data measures, such as teacher observation, multiple formal assessment results, grades, and disciplinary data (Anderson, Leithwood, & Strauss, 2010). Many educators have mistaken that data informed decision making equates to how to improve test results, rather than how to use several pieces of data to decide how to best address the needs of each student (Jimerson & McGhee, 2013). Wayman et al. (2012) found triangulating data helpful in putting high-stake test results in context to provide better information around instructional practice. Marsh, McCombs, and

Martorell (2010) noted, by allowing support staff to help teachers in developing lessons and common assessments, teachers concentrated on the larger context when analyzing data.

Many studies found the value of collaboration to analyze and understand student data to improve teacher practice and increase student achievement (Baker & Jakicic 2012; Lewis, Madison-Harris, Muoneke, & Times, 2010; Richardson, 2011; Thessin, & Starr, 2011; VanWinkle, Vezzu, & Zapata-Rivera, 2011; Wayman, Jimerson, & Cho, 2010). DuFour and Fullan (2013) explained, collaboration transpired when educators perceived each could share strengths and weaknesses within the classroom among peers and administrators. Numerous schools implemented Professional Learning Communities (PLCs) as a means of supporting teachers in analyzing data and increasing student learning as a result of the federal accountability mandates (Thessin, 2015). Nussbaum-Beach and Ritter Hall (2012) defined PLCs as " teachers and administrators who learn together with the goal of improving student achievement" (p. 29). Research indicated teachers who participated in PLCs believed the school was more successful due to team work rather than when each worked in isolation (DuFour, DuFour., Eaker, & Many, 2010). Thessin and Starr (2011), found high-stake assessment scores increased when teachers collaborated to analyze data, developed common assessments, reviewed student work, progressed and shared best-practices during PLCs. To implement PLCs in a school, administrators needed to provide an allotment of time for educators to collaborate (Baker & Jakicic, 2012; DuFour et al., 2010). Wayman, Jimerson, and Cho (2010) and Unger (2013) suggested, administrators should regularly schedule a structured time for staff to collaborate to analyze student data and implement protocols for time spent.

Distributed leadership consisted of administrators using educators in the school to help support teaching and learning. Hulpia, Devos, and Van Keer (2010), described distributed leadership as a shared process in an organized system that welcomes individual's skills and draws upon them to bolster the institution. Hulpia et al. (2010), also noted when administrators transferred control and responsibility to other staff who were in touch with the everyday experiences in the school, not only did student achievement increase, but the commitment of the staff also increased. Kennedy, Deuel, Nelson, and Slavit (2011) noted distributed leadership along with PLCs increased teacher's shared accountability for improving student achievement and increased teacher skills and knowledge. According to DuFour (2012), school districts who implemented PLCs established a guiding coalition of key support staff to assist with implementation.

Wayman et al. (2010) indicated administrators who distributed leadership to support teachers, used data efficiently and increased student learning. Furthermore, research revealed administrators who distributed leadership by using data coaches, instructional coaches, or other support staff to support and assist teachers in examining multiple measures of student data, understanding student data, implemented effective instructional practices, and facilitated discussion (Carlisle & Berebitsky, 2011; Coburn & Woulfin, 2012; Kruse & Zimmersman, 2012). Research suggested administrators should set the tone for how to analyze data and should have a shared understanding with teachers about how data improved teaching and learning (U.S. Department of Education, 2010; Wayman et al., 2012). Establishing intentional and explicit common understanding proved to simplify the work of data use, helped teachers learn from one another, and facilitated a productive collaboration (Wayman et al. 2012). Administrators who created

common understanding by establishing collaborative time to examine data (Van den Bossche, Wjselaers, Segers, Woltjer, & Kirschner, 2011) and developed a "shared mental model" for analyzing data to increase instructional practice and student achievement (Wayman et al., 2012, p. 9). DuFour (2012) noted school districts who successfully implemented PLCs created a shared knowledge about the rationalization for data analysis.

Response to Intervention

The IDEA, enacted by Congress in 1975, guaranteed every child with a disability a free and appropriate public education (FAPE) (Steinberg, 2013). Traditionally, schools used the IQ-achievement discrepancy model to identify students with specific learning disabilities (Al Otaiba, Wagner, & Miller, 2014; Bineham, Shelby, Pazey, & Yates, 2014), which led to substantial growth in the special education population (Steinberg, 2013). Schools estimated the student's potential for learning based on an individually-administered IQ test and an achievement test to measure a possible discrepancy (Chandler, 2014). Using the IQ-achievement discrepancy model, educators identified students with specific learning disabilities by determining if there was a significant discrepancy between the IQ test and achievement test (Grapin & Kranzler, 2018). Vanderheyden, Kovaleski, Shapiro, and Painter (2014) explained in the IQ-achievement discrepancy model; "a student with a learning disability is viewed as someone who has the potential and ability to perform at or above grade level, but is failing to do so, despite all customary efforts to teach such students" (p. 229). Consequently, the IQ-achievement discrepancy model became recognized as the "wait to fail" approach (Al Otaiba et al., 2014, p. 129; Chandler, 2014, p. 2; Colker, 2013, p. 614), in which students received

support after years of struggling as a developing learner (Al Otaiba et al., 2014; Chandler, 2014). While educators had to wait until a student's achievement dropped low enough to reach a significant discrepancy, students had lost crucial time for learning (Chandler, 2014). Researchers long determined IQ scores were a poor indicator of student achievement, as well as a method to identify students with specific learning disability (Vanderheyden et al., 2014). Despite the many critics of the IQ achievement discrepancy model (Al Otaiba et al., 2014; Bineham et al., 2014), as recent as 2013, many states still permitted schools to use the method for identifying students with specific learning disabilities (Maki, Floyd, & Roberson, 2015). The "wait to fail" approach created a vast number of students misidentified as needing special education supports and an overrepresented number of minority students misdiagnosed with a learning disability (Hannigan & Hannigan, 2017, p. 2).

The reauthorization of IDEA in 2004 officially introduced the term RTI to the public as an alternative to the traditional discrepancy model in identifying LD students (Arden, Gandhi, Edmonds, & Danielson, 2017; Bineham et al., 2014; Chandler, 2014). The guiding principles for the reauthorization of IDEA, 2004, consisted of accountability for all students, differentiated intervention services, and more accountability for school and district-level test results (Shapiro, 2015). Following the mandates of IDEA 2004, guidelines emerged from state education departments based on multiple comprehensive studies, which indicated, in the regular classroom students learned when provided differentiated teaching strategies, skilled-based instruction, and research-based curriculum (Price & Nelson, 2013; Steinberg, 2013). IDEA 2004 required schools to provide explicit instruction in reading, including the five essential components of

reading: phonemic awareness, phonics, reading fluency, vocabulary development, and reading comprehension strategies prior to identifying students eligible for special education (American Academy of Special Education Professionals [AASEP], 2018). Furthermore, the reauthorization of IDEA (2004) allowed schools to utilize RTI to prevent and identify reading disabilities (Al Otaiba et al., 2014; Beach & O'Connor, 2015; Hauerwas, Brown, & Scott, 2013). By 2006, all 50 states issued regulations inclusive of RTI for the identification of specific learning disabilities in the local school districts (Hauerwas et al., 2013). A recent study by Hauerwas, Brown, & Scott (2013) examined the RTI process in the identification of students with specific learning disabilities among all 50 states and found 17 states mandated RTI data, eight states banned the use of the IQ-achievement discrepancy model, and six states required districts to submit RTI procedures prior to its implementation (p. 108).

Dougherty Stahl, Keane, and Simic (2013) stated, "Most conceptualizations of RTI incorporate three common components: (a) multiple tiers of instruction, (b) evidence-based instruction, and (c) systemic collaboration and coordination of schoolwide resources" (p. 2). According to the Center on Response to Intervention (2014), RTI provided a way in which "schools identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions, and adjust the intensity and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities or other disabilities" (p. 7). Al Otaiba, Wanzek, and Yavanoff (2015) also stressed RTI provided a method for early intervention to struggling students, and established a more accurate, proactive approach to identify students with a LD. Jenkins, et al., (2013) connected the purpose of RTI to special

education by depicting it as "a multistep approach to providing early and progressively intensive intervention and monitoring within general education for purposes of improving achievement outcomes and accurately identifying students with learning disabilities" (p. 36).

History. Techniques used among RTI schools dated back more than 30 years. In the late 1970's and early 80's, Deno and Mirkin's (1977) work indicated succinct, recurrent evaluations of students in special education used by educators to inform Individual Education Plans (IEPs). Around the same time, a leader in special education, Bloom (1981) found by using formative assessments to adapt curriculum and instruction, student's academic achievement dramatically increased. Early in the 1990's, researchers developed the three-tier structure, generally depicted with a pyramid, while searching for methods to deal with student behavior concerns in the regular classroom setting (Renaissance Learning, 2016). Black and William (1998) noted how using data from assessments to determine goals and establish intervention plans increased student performance and especially decreased the achievement gaps amongst subgroups.

While disagreement around the origin of RTI existed, many traced the origin of RTI in education to findings and conclusions synthesized in a National Research Council report (Heller, Holtzman, & Messick 1982), which proposed the validity of the special education categorization system according to three criteria: "(a) the quality of the general education program, (b) the value of the special education program in producing important outcomes for students, and (c) the accuracy and meaningfulness of the assessment process in the identification of disability" (Gresham, 2007, p.11). In early 2000, the U.S. Department of Education's Office of Education Programs deliberated ways to identify

learning disabilities (LD), in conjunction with the new approach called response to intervention (Arden et al., 2017). The endorsement for the summit transpired based on well recorded concerns about the psychometric characteristics of assessments generally used to diagnose students with LD, increased number of students identified with LD, inequitable number of minority students identified with LD, and the irregular and frequent inadequate quality of special education services (Zumeta, Zirkel, & Danielson, 2014). During the summit, stakeholders examined RTI as an up-and-coming option to identifying students with LD because of the focus on providing increasingly intensive, research-based instruction based on the student's response to formative assessments (Arden et al. 2017). In short, no single individual or report received credit for the conception of the RTI framework. Crawford (2014) noted, the fundamental principles of RTI represented a compilation of more than 50 years of research from several scientists and practitioners (Johnson & Street, 2013).

Early Intervention. Considerable amounts of research documented the importance of early detection of students at risk for reading disabilities and providing intervention to prevent the development of academic difficulties (Catts, Nielsen, Bridges, & Liu, 2016; Kieffer & Vukovic, 2013; Weddle, Spencer, Kajan, & Petersen, 2016), especially with students in early elementary school (Scholin, Haegele, & Burns, 2013). An essential component of RTI, identified struggling students and provided early intervention at the onset of academic difficulties (Beach & O'Connor, 2015; Bineham et al., 2014; McDaniel, Albritton, & Roach, 2013; Werts, Carpenter, & Fewell, 2014). Hughes and Dexter (n.d.) noted, early intervention increased the chance of struggling students to develop sufficient academic proficiency.

Turse & Albrecht (2015) along with Hall & Mahoney (2013) believed for struggling students to succeed, early identification and intervention must take place. Likewise, Regan, Berkeley, Hughes, and Brady (2015) noted the importance of identifying and providing support to students with academic difficulties during the early grades of a student's education. Al Otaiba, Wagner, and Miller (2014) concluded determining students needing the most intensive intervention can take place at the beginning of first grade. Students showed positive academic outcomes when interventions began immediately upon identification and implemented with fidelity to prevent learning difficulties to become greater (ASSEP, 2017.; NSCL, 2018). Under the Early Intervening Services (EIS), IDEA (2004) allowed school districts to use up to 15 percent of federal IDEA funds to provide early intervention for students with academic or behavior difficulties but not yet identified with learning disabilities, to alleviate over identification and needless referrals (ASSEP, 2017).

Components of RTI. The RTI multi-tiered model provided research-based intervention instruction to at-risk students at progressively higher levels of intensity to facilitate learning (AASEP, 2018; Al Otabiba et al., 2014; Martin, 2015). Sharp, Sanders, Noltemeyer, Hoffman, and Boone (2016) noted the quantity and type of services a student received corresponded to the extent of support needed to succeed. The RTI model moved at-risk students through a sequence of interventions to identify areas of academic weakness (Bineham et al., 2014). Classroom teachers differentiated core instruction during Tier 1 to all students in the classroom for most students to achieve proficiency level (Averill et al., 2014).

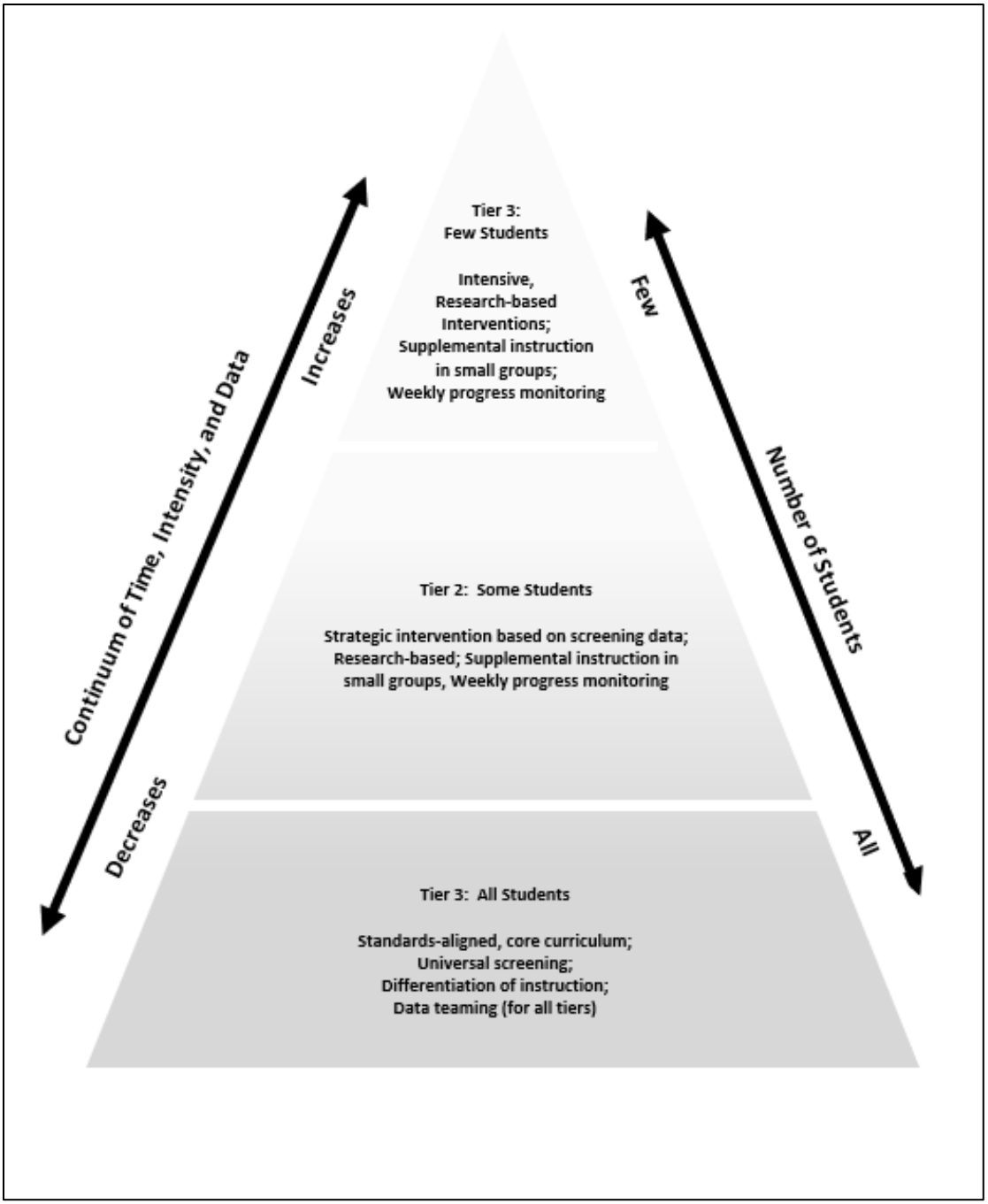

Figure 2. Graphic representation of RTI model. Adopted and reprinted with permission from *Guilford practical intervention in the schools: RTI approach to evaluating learning disabilities,* by Kovaleski et al. (2013), p. 24. See Appendix B.

Tier 2 consisted of students not meeting proficiency and were at some risk of academic failure but not considered at a high-risk level for failure (Shapiro, 2015). Whereas, Tier 3 included individualized, comprehensive, interventions implemented

daily devised to increase student achievement (Averill et al., 2014). As indicated in Figure 2, the RTI triangle depicts as students move from Tier 1 to Tier 3, the number of students decreased as the level of intensity in support increased (Kovaleski, VanDerHeyden, & Shapiro, 2013).

In addition to the multi-tiers, RTI implementation consisted of several components across the three tiers. Although various literature proposed many components of RTI, the review of literature by Al Otabiba et al. (2014) suggested four core components, including: universal screening, progress monitoring, data-based decision making, and multi-tiered intervention. However, RTI Action Network (2015) added instructional intervention fidelity as a component.

Tier 1. Tier 1, designed to meet the needs of most students in the classroom, consisted of research-based core instruction, universal screenings for every student at least three times during the school year to identify individual instructional needs, and continuous professional development to provide teachers with the skills needed to address students' academic challenges (AASEP, 2018). According to Fuchs, Fuchs, & Vaughn (2014), all students received core instruction, which included opportunities for differentiated instruction and accommodations as well as problem-solving strategies to meet students' motivation and behavior needs. In Tier 1, regular classroom teachers typically delivered core classroom instruction (McDaniel et al., 2013). Shapiro (2015) noted, when highly trained educators implemented core instruction with fidelity, theoretically, around 75% - 80% of students met proficiency benchmarks; however, in schools with high levels of struggling students, only around 50% - 70% of students reached levels of proficiency (para. 3). Students who did not show progress and reached

proficiency in Tier 1, based on data results, moved to the next RTI level, Tier 2 (Björn, Aro, Koponen, Fuchs, & Fuchs, 2016).

Tier 2. Students who made inadequate academic gains in Tier 1 moved to Tier 2 to receive more intensive and targeted instruction with small groups of students with comparable academic needs (AAESP, 2018; Fuchs & Fuchs, 2017; Mundschenk & Fuchs, 2016; Sharp, Noltemeyer, Hoffman, & Boone, 2016). The time spent in Tier 2 was, on average, longer than time spent in Tier 1, and the intensity of instruction was greater in Tier 2 (Björn et al, 2016). Fuchs & Fuchs (2017) explained the goal of Tier 2 intervention was to improve students' academic skills enough to perform successfully in Tier 1 without additional support. Likewise, Baker, Smolkowski, Chaparro, Smith, and Fien (2015) stated Tier 2 provided a more focused instruction aligned with the core instruction received in Tier 1 to increase students' academic progress. Additionally, Wanzek et al. (2016) noted Tier 2 as preventative at the early elementary level, with the intent to identify students at risk of academic failure early, implement short intervention lessons to allow students an opportunity to achieve proficiency, and to identify students who acquired significant deficiencies requiring more extensive interventions. According to Bruhn, Woods-Groves, Fernando, Choi and Troughton (2017) generally, 10% to 15% of students in a school needed Tier 2 intervention, hence schools must ensure Tier 2 intervention was efficient and achievable (p. 119). Baker et al. (2015) indicated students' academic proficiency levels increased higher when provided with Tier 2 interventions than students who only received Tier 1 intervention.

Schools often implemented the same Tier 2 intervention to all the students needing tiered support instead of providing interventions which matched students'

specific area of deficiency (Stormont & Reinke, 2013). Bruhn et al. (2017) asserted students' needs varied, thus providing only one intervention may not benefit all students. Consequently, McDaniel, Bruhn, and Mitchell (2015) proposed implementing a variety of interventions based on student data and teacher input to assign interventions specific to students' needs.

Harlacher (2015) recommended in Tier 2, small groups meet for approximately thirty minutes, three to five times a week, instructed by a general education teacher or an intervention specialist. In Tier 2, the small groups typically consisted of between 5 to 8 students, dependent on the RTI model implemented (Shapiro, 2015). Students received Tier 2 intervention for a predetermined number of weeks, usually between 8 to twelve weeks (Coyne et al., 2013). During Tier 2 intervention, schools assessed student's responsiveness to the intervention to determine whether the student showed adequate progress and was ready to move back to Tier 1 (Fuchs & Fuchs, 2017; Regan, Berkeley, Hughes, & Brady, 2015) or if the student showed inadequate progress and needed a more intensive level of intervention, Tier 3 (Coyne et al., 2013; Fuchs & Fuchs, 2017; Johnsen, Parker, & Farah, 2015).

Tier 3. In the RTI model, Tier 3 provided students with individualized, intensive and highly focused, research-based intervention daily and over a longer period of time to increase academic proficiency (AASEP, 2018; Averill et al., 2014; RTI Action Network, 2015; Sharp et al., 2016). Tier 3, designed for students with extensive difficulties in achieving at the proficiency level, did not respond to the supports in Tier 1 or Tier 2 intervention; Tier 3 intervention, addressed these students' needs through small group or individualized instruction (AASEP, 2018; Ervin, n.d.). Although Ervin (n.d.) noted some

students with severe academic deficiencies required immediate placement in Tier 3 in lieu of waiting to go through Tier 1 or Tier 2; students who experienced a level Tier 3 intervention, needed support in a more timely and efficient manner, which required movement to an upper Tier. Ervin (n.d.) noted in Tier 3, remediation of current problems and prevention of more significant concerns or the development of new problems because of persistent deficits.

Past studies on intensive interventions identified basic differences from Tier 2 to Tier 3, such as increased intervention instruction, increased duration of intervention, and decreased group size (Denton et al., 2013; Harlacher, 2015). Furthermore, a study conducted by Jenkins et al. (2013) found more specialized interventionist implement of RTI in Tier 3. Sharp et al. (2016) recommended educators who administer and score assessments receive training, undergo annual fidelity checks to guarantee consistency in administering and scoring assessments, and receive annual training. Harlacher (2015) indicated Tier 3 must coincide and supplement Tier 1, without interfering or conflicting with the core instruction in the general education classroom, so students still received grade-level standards while also receiving intervention focused on needed skills.

In Tier 3, group size ranged from three to five students, with some RTI models using one-to-one instruction (Harlacher, 2015). Referral for special education services typically occurred for students who made inadequate progress after receiving highly intensive intervention in Tier 3; however, the intervention team or parents could refer students for special education prior to Tier 3 (Sharp et al., 2016). On the other hand, some schools with one-to-one intervention included special education services as a component of Tier 3 (Harlacher, 2015; Sharp et al., 2016).

Universal Screening. Universal Screening, designed to identify students not meeting academic goals in a general education classroom, provided educational data for students who struggled and experienced academic difficulties. Frequently the student gained benefits from targeted evidence-based intervention as the first step in the RTI model (Catts et al., 2016; Hughes & Dexter, n.d.; Jenkins & Johnson, n.d.; Regan et al., 2015; Salinger, 2016). Generally, schools administered universal screenings to every student (McInerney & Elledge, 2013) three times during the academic school year: beginning, middle, and end (Regan et al., 2015). However, Jenkins and Johnson (n.d.) recommended schools screen students at the beginning of the school year to budget instructional funds intelligently (n.d.). Catts et al. (2016) noted, the use of universal screening within an RTI model as early as the start of kindergarten can identify students at-risk for reading difficulties wisely.

NCLB (2001) and IDEA (2004) mandated schools to identify students at-risk of failure through universal screening and to provide support for students to achieve maximum success (Salinger, 2016). Kane, Roy, and Medina (2013) stressed the importance of early identification of students with learning difficulties through universal screenings to support later achievement, and without this support, students at-risk academically were at an increased risk to drop-out of school and consequently experience unemployment. Therefore, Salinger (2016) highlighted the importance of early identification and universal screening to provide interventions to as many students with reading difficulties as possible.

Schools often administered curriculum based-measurement in reading (CBM-R), nonsense word fluency (NWF), and word identification fluency (WIF) as tools for

universal screening in the early grades of elementary school (January, Ardoin, Christ, Eckert, & White, 2016). Despite many previous studies, researchers found CBM-R as a beneficial tool for universal screening (January & Ardoin, 2015; Kilgus, Methe, Maggin, & Tomasula, 2014); schools used NWF and WIF with emergent readers because of the level of skills required with CBM-R (January et al., 2016). As a result, publishers recommended not to administer CBM-R to students until mid-year of first grade, and even then, to administer NWF along with CBM-R until second grade (Good & Kaminski, 2007; Pearson Education, 2012).

Progress Monitoring. In the RTI model, schools progress monitored to make instructional decisions (Reschly, 2014) and to evaluate student's academic progress based on the universal screening results which indicated an area of at-risk for difficulties (Hughes & Dexter, n.d.). Fuchs and Fuchs (2017) noted, teachers used progress monitoring data to measure student responsiveness or lack of responsiveness, then made instructional adjustments and determined when students should move to a different tier. McInerney and Ellege (2013) asserted, the more frequently teachers progress monitored, the more rapidly students received intervention instruction.

Teachers commonly used progress monitoring in tier 2 and tier 3; although, it may occur in all three tiers of RTI instruction (Gustafson, Svensson, & Falth, 2014; Jenkins et al., 2013; Robinson et al., 2013). McDaniel et al. (2013) reported, teachers determine student movement based on progress monitoring data. Renaissance (2016) reported progress monitoring of students typically lasted between six to eight weeks, however, little evidence supported that notion. According to literature, how often to progress

monitor varied from monthly, bimonthly, every two weeks or weekly (DuFour & Mattos, 2013; Erchul, 2015; Hughes & Dexter, n.d.).

Fidelity of Implementation. Documented throughout the literature, fidelity of the RTI components during implementation became crucial for student academic improvement (Montalvo, Combes, & Kea, 2014; Reschly, 2014; Robinson et al., 2013). Robinson, Bursuck, and Sinclair (2013) described fidelity of implementation as the extent to which schools implemented the RTI model and instruction as intended. To achieve fidelity, schools allocated adequate time, provided appropriate intervention intensity, trained qualified staff, and furnished a sufficient amount of materials and resources (AASEP, 2018). Gersten, Jayanthi, and Dimino (2017) and McKenna, Flower, and Ciullo (2014) noted the importance of observing and measuring fidelity of implementation, providing additional training, and adjusting if necessary.

Recent research indicated schools found implementing RTI with fidelity challenging (Dallas, 2017). Moreover, Harn, Rarisi, and Stoolmiller (2013) asserted when schools implemented a research-based intervention, adapting the curriculum was common, given the extent of implementation was almost never 100%. Bigham and Riney (2014) indicated one main problem of implementing RTI with fidelity involved solving the difficulty of implementation of interventions due to scheduling conflicts and staffing allocations. Consequently, schools often resorted to pulling students out of core reading instead of during electives, science, or social studies, the more desired classes (Dallas, 2017).

High-Stakes Testing

In 2001, high-stakes accountability increased for state's education systems as part of the NCLB Act, the prescribed changes of the Elementary and Secondary Education Act (ESEA), required every student enrolled in a public or charter school tested in grades three through eight and grade ten in the areas of mathematics and communication arts (Dee & Jacob, 2010; Moe, 2014). Since NCLB, high-stakes testing had been a substantial accountability tool used to evaluate the success of school districts, schools, and teachers (Au & Gourd, 2013). NCLB required all students to score proficient or higher in mathematics and reading by 2014 (Rubin, 2011); otherwise, the law required school districts to reassign or dismiss administrators and teachers, possibly reconstruct or close schools (Berliner, 2011; David, 2011). The goal of NCLB was to close the achievement gap between the less privileged and more affluent students; however, the debate ensued (Braun, Chapman, & Vezzu, 2010; Chudowsky et al., 2009). Berliner (2011) argued, "the NCLB act was supposed to reduce the achievement gap between poor and wealthy students, but data supporting that claim is in dispute... if the gap is actually closing, it is only by the smallest of amounts" (p. 287-288). Nichols, Glass, and Berliner (2012) explained the rationale for the increased rigor and accountability in testing, attaching considerable rewards or severe penalties to test results, could result in students and teachers trying harder, performing better, and learning more. School districts, schools, and teacher's evaluations have been part of the increase in students' test scores (Wei, Pecheone, & Wilczak, 2015).

Several studies reported conflicting findings on whether high-stakes assessments improved student achievement. Some researcher indicated students who scored high on a

standardized test did not necessarily score high on other high-stakes assessments (Blazer, 2011). On the other hand, other researchers maintained high-stakes assessments lead to significant growth in students' results on other high-stakes tests (Jacob, 2005). Nichols et al. (2012) stated, "a pattern seems to have emerged that suggests that high-stakes testing has little or no relationship to reading achievement, and a weak to moderate relationship to math" (p. 3). Moreover, Nichols et al. (2012) noted NAEP, a national exam administered to a random sampling of schools across the United States, found achievement scores of fourth and eighth graders progressed at a higher rate in mathematics prior to NCLB while reading achievement scores stayed rather constant. According to the National Research Council (2011) high-stakes testing has not shown to increase students' mathematics and reading achievement levels across the nation nor has it closed the achievement gap between minority and White students or between students from high-income families and those from poverty families. However, Ravitch and Chubb (2009) contended student achievement increased at a quicker rate after the passage of NCLB. Nevertheless, research failed to consistently establish the claim that high-stakes testing increased student achievement (Nichols, Glass, & Berliner, 2012).

Prior to NCLB, states collectively spent roughly $423 million on state-mandated testing (Mulholland, 2015, para. 4). After NCLB, direct and indirect cost of standardized testing grew dramatically. A Brookings Institute study (Chingos, 2012) calculated approximately $27 annually per student spent on standardized tests, although the amount only included contract cost for state-mandated assessments (p. 4). In another study (Topol, Olson, Roeber, & Hennon, 2012), the Assessments Solutions Group (ASG) reported school districts spent on average $20 - $25 per student annually (p. 9). The

Florida Department of Education (2010) spent approximately $29.41 per student a year ($74 million a year) on the Florida Comprehension Assessment Test (FCAT), Florida's state-mandated assessment; which contained the amount of developing test questions, holding meetings with Florida educators to review test questions, conducting field test, producing test materials, mailing materials, scoring tests, and reporting test results (Breiner, 2015, p. 15). Additional cost to school districts associated with testing included local benchmark assessments, intervention programs, restructuring instruction, and professional development (Breiner, 2015; Nelson, 2013). Although the additional cost varied among school districts, some districts estimated spending nearly $20 to $50 million annually (Baines & Stanley, 2004, p. 8). An American Federation of Teachers study (Nelson, 2013) reported a Midwestern school district spent between $60 - $80 per student; while an Eastern school district spent between $50 - $70 per student for direct testing cost (p. 18). Additionally, researchers found the Midwestern school district spent between $400 - $600 per student; while the Eastern school district spent about $1,100 per student for both direct and indirect testing cost (Nelson, 2013, p. 25). Several national studies found the costs of testing for school districts ranged from $50 per student to $100 per student (Nelson, 2013, p. 18), costing states approximately $1.7 billion per year; which represented less than 1 percent of K-12 per student spending (Mulholland, 2015, para. 4).

In 2010, with the introduction of the Common Core, the U.S. Department of Education allocated $330 million in grant money to states who used either the Partnership for Assessment of Readiness for College and Careers (PARCC) or the SMARTER Balanced Assessment Consortium (SBAC) to cover the development cost of the

assessments (Chingos, 2012, p. 3). Both the PARCC and the SBAC, designed to have higher quality items, assessed 21st century skills, aligned to the Common Core Standards, and assisted in learning and instruction (Topol et al., 2012). PARCC anticipated the tests would cost about $29.50 per student, and SBAC expected $22.50 per student, which was close to the national $27 per student average (Chingos, 2012, p. 4). Nevertheless, some states opted out of using PARCC or SBAC to develop the states' own more cost-effective tests.

Although, test preparation helped students develop test taking skills, an enormous amount of time spent showing students how to answer questions and familiarizing them with the format of the assessment, and other test practicing strategies resulted in loss of instructional time (Brown, & Cliff, 2010; Byrd-Blake et al., 2010; Nelson, 2013; Rush & Sherff, 2012). The Northwest Evaluation Association found 52% of teachers spent too much time preparing for and administering assessments, 42% spent the right amount of time, and 6% spent too little time (Gewertz, 2014, p. 8). In addition, 70% of teachers and 55% of administrators believed state-mandated testing had taken too much time away from instructional time and student learning (Gewertz, 2014, p. 8). The study conducted by the American Federation of Teachers found teachers in one school district consumed approximately 80 hours a year preparing students in tested grades for district benchmark assessments and state-mandated tests; while teachers in another school district spent 100 hours or more a year (Nelson, 2013). Likewise, Bruno, Ashby, and Manzo (2012) reported, on average, teachers devoted at least five hours a week on test preparation and administering mandated standardized tests. Blazer (2011) argued teachers devoted too much instructional time in test preparation; which in many states, test preparation began

when students returned to school in the fall. Terry (2010) and Li and Xiong (2018) argued increased time for preparing students for assessments did not result in increased student achievement.

Achieve (2015), a nonprofit organization, developed the Student Assessment Inventory for districts, a test-inventory tool designed so school districts could analyze the assessments from a student's viewpoint. Achieve (2015), urged school districts to only administer the minimal number of assessments imperative to furnish diagnostic, teaching and accountability outcomes. The tool helped school districts decide if the test results were beneficial to teachers, school district administrators, or both, if schools utilized the test as intended, how long the test would take to administer and how often, and how much the assessment cost (Achieve, 2015).

School districts mandated a considerable amount of standardized assessments, not states. Students in grades in which NCLB required annual testing, tested as much as twice a month, but at least once a month (Lazarin, 2014). A Jefferson County school district in Kentucky, administered 20 assessments a year to the 6th-8th grade students of which 16 were district mandated test (Lazarin, 2014, p. 19). Likewise, a school district in Sarasota County, Florida administered 14 district and state standardized assessments to their middle school students a year (Lazarin, 2014, p.19). The study by the Massachusetts Department of Elementary and Secondary Education (ESE) and the American Institutes for Research (AIR) found in a representative sample, the average school district mandated 6.7 tests annually (Marchand & Pitluck, 2015, p. 9). According to Lazarin (2014), on average, students spent 1.6 percent (15 - 16 hours) or less actually taking district and state standardized assessments (p.19). Whereas, Marchand and Pitluck

(2015) indicated three of the four school districts in the study spent six to nine days testing students using district mandated assessments and the other district spent 18 days testing (p. 31). District testing occurred more often with more loss of instructional time in urban school districts (Lazarin, 2014). In urban high schools, students took 3 times as many district assessments and spent 266% more time taking them than students in suburban high schools (Lazarin, 2014, p. 4).

Throughout the current literature, researchers noted numerous pitfalls of high-stakes testing in education; however, some researchers agreed high-stakes testing in schools benefited student learning (Blazer, 2011; Polesel, Dulfer, & Turnbull, 2012; Wei et al., 2015). School districts, administrators, and teachers used state-mandated testing data to identify gaps in teaching and learning to increase student achievement (Wei et al., 2015). Evidence suggested school districts and administrators used high-stakes test results to better focus on professional development needed to improve student learning (McMillan, 2005). Classroom teachers used high-stakes test data to diagnose students' strengths and weaknesses and then revised and developed instructional programs to assist low-achieving students (Blazer, 2011; Phelps, 2006). In addition, studies suggested school districts, administrators, and teachers used data to inform instruction to a higher extent after the enactment of NCLB (Blazer, 2011). Opponents of high-stakes testing complained state-mandated testing forced teachers to narrow the curriculum; however, supporters believed high-stakes testing guided teachers to better align the curriculum with the state standards to ensure teachers taught what students needed to learn and to be successful on assessments (Phelps, 2006; Yeh, 2005). Research also noted performance assessments, which required a student’s higher-order thinking skills, created more

positive adjustments in teachers' instruction, improved student skill development, heightened student engagement, and enhanced student's conceptual knowledge (Wei et al., 2015).

Approaches to Analyzing Data

Bambrick-Santoyo (2010) and Lemov (2010) described various methods teachers used to collect and analyze student data and improvement in teaching and learning. Further, research recognized three clear approaches for gathering and examining student data to increase instructional practices: the diagnostic approach, the methods approach, and the teacher approach (Wieman, 2014). All three approaches had common components; however, each had exclusive components.

Traditionally, in the diagnostic approach of collecting data, teachers determined what students knew. Bambrick-Santoyo (2010) and Lemov (2010) explained, in the diagnostic approach teachers identified specifically what skills students knew to determine what content the teachers needed to teach and the precise students who needed to learn the skill. After teachers collected student data, data analysis began by aligning to the intended learning goals (Wieman, 2014). Teachers then used data to guide instruction more thoroughly (Bambrick-Santoyo, 2010) or provided specific feedback to students (Frey & Fisher, 2011). Wieman (2014) noted, "if students achieve well (or poorly) on their assessments, nothing in the diagnostic approach helps teachers determine which specific teaching practices were effective and which were not" (p. 547). Teachers found the diagnostic approach, particularly suitable for skills divided into specific segments on an assessment, challenging to design assessments to target instruction for more complex skills (Wieman, 2014).

The purpose of collecting data in the methods approach is for teachers to improve instructional practices. Gallimore, Ermeling, Saunders and Goldenberg (2009) and Lampert and Graziani (2009) described, in the methods approach teachers collected data on teaching and students learning; then teachers examined the data to identify the outcomes of teaching on student achievement. With the method, teachers improved teaching by implementing proven teaching strategies and by eliminating unsuccessful teaching strategies (Wieman, 2014). However, Wieman (2014) noted the approach does not provide teachers the content to teach nor does the approach define pedagogy.

The purpose of collecting data in the teacher approach was to help teachers cultivate theories and knowledge to raise student achievement. Hammerness et al. (2005) explained, with the teacher approach, teachers challenge widely held beliefs and start to develop the expertise needed to teach in the new way. Wieman (2014) indicated, in the teacher approach, teachers must pay attention to unexpected results, causing a disequilibrium which would lead to the advancement of awareness and the improved instructional practices.

Data Informed Decisions

Over the last decade, the attention to data use in education grew tremendously and the terms data driven decision making, data-based decision making, and data informed decision making evolved, and many used the terms interchangeably (Shen et al., 2012). However, currently throughout the literature on the use of data in education, researchers used the terms data driven decision making and data informed decision making more frequently. The researcher decided to use the term data informed decision making, a method of collecting, analyzing, and interpreting both quantitative and qualitative data to

inform decisions in improving an educational setting (Mandinach, 2012; Means, Padilla, & Gallagher, 2011). Several researchers contend data should inform instruction not drive instruction (Murray, 2014; Shen et al., 2012). Murray (2014) cautioned, until educators use student assessment data as only one fragment of information among several, the time spent on data informed decision making will have little results on increasing teaching and learning. According to Murray (2014), "data can serve as an important element in effective decision-making but decisions should not be totally based on or driven by data…and data fails to give educators all the information they need to help children learn" (p. 16).

School districts across the nation started upgrading the use of student data, because the Elementary and Secondary Education Act of 2001 (ESEA) urged schools to use student data to inform decisions about instruction at the district level, school level and in teachers' classrooms (Means et al., 2011). Since the NCLB Act, the term data-informed decision making became a fundamental part of education across the United States at all levels, from the state level to the district level to the classroom teacher, and received scrutiny in terms of policy, monetary support, and accountability (Mandinach, 2012). The attention on using data to improve student achievement increased when the American Recovery and Reinvestment Act (2009), dispersed funds to states who agreed to use student data systems (Mandinach, 2012; Means et al., 2011).

The education field had not agreed upon a commonly accepted definition of data literacy, however, Mandinach and Gummer (2013) defined data literacy as "the ability to understand and use data effectively to inform decisions" (p. 30). The theme of data literacy existed in the revised standards for teachers from the Interstate Teacher

Assessment and Support Consortium (InTASC, 2013; Council of Chief State School Officers [CCSSO], 2011) and for administrators from the Interstate School Leaders Licensure Consortium (CCSSO, 2014; ISLLC, 2014). In the 2014 ISLLC standards, Standard 1 expected administrators to "collect and use data to identify goals, assess organization effectiveness, and promote organizational learning" (CCSSO, 2014, p. 16), Standard 8, required administrators to "ensure the implementation of data systems that provide actionable information" (p. 19), and Standard 11 called for administrators to "promote a culture of data-based inquiry and continuous learning" (p. 21). Mandinach and Gummer (2013) noted how often the InTASC standards document mentioned the use of data to improve teaching and learning. Clearly, policymakers and government officials believed the use of data to increase teaching and learning was an important part of improving education.

Policymakers, government officials, and educators turned to data informed decision making as a possible answer to many of education's most urgent issues. Mandinach and Jackson (2010) noted many districts disclosed the use of data to reach the needs of the learners, to determine to what extent the curriculum or program works, and how adjustments to the curriculum or program increased student achievement. Most educators found the most important reason for using data was to adjust educational teaching to meet the needs of all students (Mandinach, 2012). In addition, educators used data as a method of predicting student performance (Means, Padilla, & Gallagher, 2010). Interest in data-informed decision making increased from policymakers to researchers; which resulted in a growth of literature around the subject. Numerous studies regarding the use of data in schools (Mandinach & Gummer, 2012), as well as studies focused on

the use of data nationally funded by the U.S. Department of Education (Means et al., 2010, 2011) were just a few examples.

Even though the use of data in schools changed through the rise of high-stakes accountability statute, many teachers embraced the concept of using data to inform instruction but remained skeptical towards using data (Jimerson & Wayman, 2012; Louis, Leithwood, Wahlstrom, & Anderson, 2010). Teachers used data since the one room schoolhouses; taught and used assignments and homework, adjusted the teaching, and gave assessments and determined grades. However, today, the increased pressure from federal and state to hold schools and teachers accountable and the amount of data available made data informed decision making more complex (Honig & Venkateswaran, 2012; Jimerson & Wayman, 2012; Mandinach, 2012).

Often administrators and teachers did not use data to inform instruction due to the lack in knowledge of an explicit and detailed method to facilitate the use of data to improve teaching and learning (Cosner, 2011; Thomas, 2010). Educators were unsure about what data to utilize, when to use data, and how to use data (Murray, 2014). In a 2010 report, the U.S. Department of Education indicated "the greatest perceived area of need among districts is for models of how to connect relevant data to instructional practice" (as cited in Means et al., 2010, p. 47).

Previous researchers described the administrators' role in data use and building capacity among teachers as essential. Unfortunately, research found few administrators skilled enough to effectively lead a school in data use (Means et al., 2011; Wayman et al., 2010; Wayman et al., 2012). In addition, much of the research on administrators use of data focused on systemic supports for using data in education (Wayman et al., 2010;

Wayman et al., 2012) instead of analyzing how modeling by administrators impeded or inspired teachers to engage in using data (Jimerson & McGhee, 2013).

Although using data to inform instruction in education increased, building educators' capacity to examine data and become data literate had not (Mandinach & Gummer, 2013). Research literature revealed educators lacked the knowledge of analyzing data to improve student achievement (Mandinach 2012; Murray 2014). Despite educators needto acquire the necessary skills to become data literate, few formal courses and opportunities were available for teaching data literacy development (Mandinach & Gummer, 2013). At the time, U.S. Secretary of Education, Arne Duncan recommended schools concentrate on training teachers and administrators through professional development (Mandinach & Gummer, 2013). Means, Padilla, and Gallagher (2010) noted 90% of school districts provided data literacy professional development; however, only a limited number of schools and teachers participated (p. 12). Results of a self-reported survey of state data directors, showed only 10 states requiring data training for superintendents, 13 for principals, and 14 for teachers (Data Quality Campaign, 2012, p. 13). Whereas, only 11 states required aspiring teachers to take data literacy as part of the teacher licensure process (Mandinach & Gummer, 2013, p. 33).

Although educators and policymakers appeared to agree using data to inform and improve instruction was critical, which data to use and the best method to analyzing data was vague. Regardless of having clarity, using data to inform or improve instruction was complex and confusing (Bambrick-Santoyo, 2010; Mandinach, 2012). Therefore, many school districts invested in a computer data system to provide and analyze student achievement results for educators to access to support decisions in teaching and learning

(Herbert, 2011; Shaw & Wayman, 2012). Unfortunately, districts found the purchasing of computer data systems did not automatically result in educators consistent use (Shaw & Wayman, 2012; Wayman & Cho, 2014). Wayman and Cho (2014) also suggested the rational for the low use of computer data system were the results of inadequate implementation.

Leveled Literacy Intervention

In 2008, the authors Irene C. Fountas and Gay Su Pinnell developed Heinemann, a division of Houghton Mifflin Harcourt, and published Leveled Literacy (LLI). The supplemental literacy intervention system was a short-term, small-group, supplemental program designed for kindergarten through second grade students who had complications with learning to read and write (Ransford-Kaldon, Flynt, & Ross, 2011). The objective of LLI was to expedite a student's development to grade level so an individuals' literacy deficiencies did not turn into long-term deficits and expand student's motivation and interest in literacy (Fountas & Pinnell Literacy, 2017; Ransford-Kaldon et al., 2010; Ransford-Kaldon et al., 2011). LLI was suited for regular education students who needed extensive support to reach grade-level proficiency, English Language Learners who needed additional reading instruction, and students who qualified for special education services (Fountas & Pinnell Literacy, 2017; Ransford-Kaldon et al., 2013).

Students who received LLI, met in a small group with a trained teacher daily for 30 minutes of direct instruction lessons in reading, writing, and word work (U.S. Department of Education, 2017, p. 2). The intervention normally lasted for 12 to 18 weeks, contingent on the student's progress (Fountas & Pinnell Literacy, 2017, para. 7). LLI emphasized the progression of oral language skills as the fundamentals of reading

and as shown in Table 1 the five essential elements of reading instruction recognized by the National Reading Panel (2000).

Table 1

Summary of National Reading Panel's Findings on the 5 Essential Components of Reading

Element	Characterization	Findings
Phonemic Awareness	Knowing spoken words are made up of smaller parts called phonemes.	Teaching phonemic awareness significantly enhanced student's reading compared to the lack of phonemic instruction.
Phonics	Knowing the relationship between letters and phonemes, and when blended together words are formed.	Teaching phonics explicitly improved student's progress in learning to read.
Vocabulary	Recognizing words and understanding them.	Vocabulary needs to be taught directly and indirectly.
Fluency	Having the ability to recognize words quickly with expression.	Guided and repeated oral reading increased student's word recognition, fluency, and comprehension.
Comprehension	Understanding what is read.	Student's comprehension is improved through various reading strategies, including questioning and summarizing.

Note: The components were included in the *National Reading Panel* (2000).

Fountas and Pinnell, developed LLI based on empirical reading research, vocabulary knowledge and student motivation (Fountas & Pinnell Literacy, 2017; U.S. Department of Education, 2017). The LLI texts, leveled by difficulty, were based on the Fountas & Pinnell Text Level Gradient: (Fountas & Pinnell, 2011b) interesting language, recurring phrases, rhyme, and natural language patterns (Fountas & Pinnell, 2013).

According to Fountas and Pinnell (2013), students benefit from text read without difficulty at an “independent level”, as well as more challenging texts written at an “instructional level” (para. 1). Therefore, LLI provided students both types of reading experiences, alternating between both “independent level” text and “instructional text”. When students read easier text, fluency increased, which provided students opportunities of success, and an increase in confidence (Allington, 2006; Fountas & Pinnell, 2013; Harrison et al., 2008). On the other hand, when students read more challenging texts with the support of the LLI teacher, students developed more complex reading skills (Ransford-Kaldon et al., 2010).

Previous studies showed a positive relationship between LLI and students’ literacy skills, although the methodological rigor of the studies varied (Ransford-Kaldon et al., 2010; Ransford-Kaldon et al., 2013). Some researcher utilized random sampling, demographic matching, and control groups to determine a positive relationship between LLI instruction and student outcome (Ransford-Kaldon et al., 2010; Ransford-Kaldon et al., 2013). In addition, the assessments used to compute student outcome varied, including Fountas and Pinnell benchmarks, Gates-MacGinite Reading Test (GMRT), and the Dynamic Indicators of Basic Early Learning Skills (DIBELS) (as cited in Ransford-Kaldon et al., 2010; Ransford-Kaldon et al., 2013).

Regardless of the differences, all the studies concluded LLI improved early literacy skills. Both Harrison et al. (2008) and Peterman, Grehan, Ross, Gallagher, and Dexter (2009) found K-2 students who received LLI instruction made significant growth on the Gates-MacGinite Reading Test. Likewise, Ransford-Kaldon, Flynt, and Ross (2011) and Ransford-Kaldon et al. (2013), concluded both rural and suburban K-2

students who enrolled in LLI notably exceeded students in the control group who did not receive LLI instruction. In 2013, results from a study with K-5 students from 114 schools, indicated students who received LLI made an average of nine months reading growth over only four and half months (Demers, 2012, p. 5). Further, Fountas and Pinnell (2011a) analyzed benchmark assessment data from 4,881 students across the United States and Canada, who received LLI. On average, the students demonstrated accelerated progress of eight months in 4.2 months, 68% of the students increased their reading skills three levels, and 12.5% of the students gained seven or more levels (p. 2).

Summary

Chapter Two examined existing literature related to teaching all students to become proficient readers by third grade by implementing a system for early identification of at-risk students, providing high quality instruction, and implementing intensive interventions. Specifically, discussion of addressing the needs of struggling readers included educational reform, RTI, LLI, data informed decision-making, analyzing data, proven instructional strategies, and reading components (Al Otaiba, Wanzek & Yavanoff, 2015; Baker & Jakicic 2012; Calkins et al., 2012; El Moussaoui, 2017; Mandinach, 2012; Ransford-Kaldon et al., 2011; Wieman, 2014). Since the enactment of IDEA (2004), schools implemented the RTI model to increase student achievement (Fuchs et al., 2012). A review of the literature in Chapter Two indicated the use of LLI as an early reading intervention program to increase the reading proficiency of struggling readers (Fountas & Pinnell, 2013).

Chapter Three described the research design, data collection procedures, and data analysis methods in the study. Whereas, Chapter Four outlined the data and analysis of findings. Chapter Five addressed the conclusions and implications for future research.

Chapter Three: Methodology

Overview

The purpose of this study was to determine a possible difference in STAR reading scaled scores gained among 2nd grade students with reading difficulties, who received LLI, and a like group of 2nd grade students with reading difficulties, who did not receive LLI. The researcher also examined the perceptions of the LLI teachers and SLT members on the LLI program. Additionally, the researcher conducted observations to determine whether teachers implemented LLI with a high level of fidelity. The implications from the study could potentially provide the researched school district information regarding the implementation of LLI as an intervention program, to possibly increase reading among at-risk 2nd-grade students. Furthermore, the study utilized STAR Reading pre-and post-scaled scores, a Likert survey of teachers' perceptions, interview responses, and observations as data collection instruments.

Research Site

The research site was a large urban public-school district located in the Midwest. The school district had 45 elementary schools, 9 middle schools, 14 high schools, and 6 alternative schools (MODESE, 2016b, p. 1). During the 2016-2017 school year, the district was comprised of 1,930 teachers and nearly 23,854 Pre-K through 12th grade students (MODESE, 2016b, p. 1). Of these students, 85% qualified for free/reduce lunch, 12.7% received special education services (SPED), and 7.8% were English Language Learners (ELL) (MODESE, 2016c, p. 2). The demographics in the researched district for the 2016-2017 school year were 84.47% African-American, 9.81% White, 2.9%

Hispanic, 2.15% Asian/Pacific Islander, 0.18% American Indian/Alaska Native, and 0.48% other (MODESE, 2016c, p. 1) (see Table 2).

Table 2

2016-2017 Researched School District Demographics

School	Total Enrollment	African-American	White	Hispanic	Asian/ Pacific Islander	American Indian	SPED	ELL
1	379	98.7%	0.5%	0%	0%	0%	15.3%	0%
2	368	100%	0%	0%	0%	0%	8.4%	0%
3	219	98.6%	1.4%	0%	0%	0%	9.1%	0%
4	202	97.5%	2.0%	0%	0.5%	0%	10.9%	0%
5	216	99.5%	0.5%	0%	0%	0%	8.3%	0%
6	279	98.2%	1.8%	0%	0%	0%	10.8%	0%
7	345	93.3%	2.0%	1.2%	2.0%	1.4%	5.8%	7.0%
8	399	99.2%	0%	0.8%	0%	0%	11.3%	2.5%
9	231	99.1%	0.9%	0%	0%	0%	10.8%	0%
10	304	93.8%	2.6%	1.6%	1.6%	0.3%	13.8%	2.3%
11	315	92.7%	5.7%	1.0%	0.6%	0%	16.5%	1.6%
12	256	99.2%	0.8%	0%	0%	0%	9.8%	0%
13	323	99.1%	0.6%	0.3%	0%	0%	4.3%	0%
14	352	62.2%	13.6%	12.8%	11.4%	0%	11.4%	27.3%
15	363	90.4%	7.4%	0.6%	0.8%	0.8%	8.8%	0%
16	344	52.9%	19.2%	16.3%	11.6%	0%	6.7%	34.3%

Continued

Table 2 Continued

17	245	98.8%	0%	0.4%	0.8%	0%	13.6%	0%
18	403	82.1%	12.9%	3.7%	0.5%	0.7%	11.9%	1.5%
19	189	99.5%	0%	0%	0.5%	0%	11.9%	0%
20	403	96.0%	1.2%	0.7%	0.5%	1.5%	11.6%	0%
21	388	68.3%	17.3%	9.8%	4.6%	0%	5.5%	16.0%
Total	6523	90.2%	4.9%	2.7%	1.9%	0.3%	10.3%	5.0%

Note: School and district information obtained from Missouri Department of Elementary & Secondary Education, 2016.

The 2016-2017 school district's demographics did not mirror that of the state's demographics, as depicted in Table 3. Ethnicity in the researched district indicated 81.8% African American, compared to the state's 16.1%, while the White representation was 11.5%, compared to the state's 72.3%.

Table 3

2016-2017 District and State Demographics

	District	State
Total Enrollment	23,854	885,138
African American	81.8%	16.1%
White	11.5%	72.3%
Hispanic	2.9%	5.9%
Asian/Pacific Islander	2.2%	2.1%
American Indian	0.2%	0.4%

Note: School and district information obtained from Missouri Department of Elementary & Secondary Education, 2016a.

Research Design

The researcher utilized stratified random sampling of student secondary data to ensure the study sample was representative of the School District's second grade LLI student population. According to Fraenkel, Wallen, and Hyun (2012), using a stratified random sample allowed for "a sample selected so that certain characteristics are represented in the sample in the same proportion as they occur in the population" (p. 106). The researcher selected a random sampling from all second-grade students who received LLI instruction. For the teacher perception survey and for the interviews, the researcher used a convenience sampling size of 10 to 15 among each subgroup, as recommended by Fraenkel et al. (2012), who suggested a sample size between 1 and 20 to generalize the qualitative results.

Null Hypotheses and Research Questions

The researcher examined the following null hypotheses for this study:

Null Hypothesis 1: There is no difference in the individual STAR reading scaled score gained in 2nd grade students with reading difficulties who participate in LLI and 2nd grade students with reading difficulties who do not participate in LLI, as measured by pre-and post-scores on STAR reading assessment

Null Hypothesis 2: There is no relationship in the mean STAR reading scaled score gain in 2nd grade students with reading difficulties and the fidelity of implementation mean observation score.

Research Question 1: How do Leveled Literacy Intervention teachers perceive Leveled Literacy Intervention?

Research Question 2: How do SLT members perceive Leveled Literacy Intervention?

Methodology

The researcher selected a mixed-methods approach for the study, which included both quantitative and qualitative data. By using a mixed-method approach, the researcher anticipated a comprehensive perspective of the research questions and a complete picture of the data results. The researcher utilized pre-and post-STAR Reading scaled scores, teachers' perception survey responses, responses to interview questions, and LLI lesson observations as data collection instruments. The STAR Reading data compared student reading levels from the beginning to the end of the school year, to evaluate students' progress in reading. The district administered the STAR Reading assessment to every student in first through fifth grade three times a year. The secondary data used for this study were from the first assessment, administered August 6th through August 20th, and the third assessment, administered May 12th through May 30th. The STAR Reading standards-based assessment measured student performance in crucial reading skills (Renaissance Learning, 2015). The STAR Reading used a multiple-choice item CAT, which adjusted the questions administered depended on student response and difficulty of the questions (Shapiro, 2015). The test included 34 questions, generated from a question bank of more than 2,800 items, developed to assess reading skills for K-12 students (Renaissance Learning, 2015, p. 17). Renaissance Learning developed the questions to represent a balanced spectrum of cognitive complexity.

Item specifications require verifying the accuracy of all content; using grade-

> level-appropriate cognitive load, vocabulary, syntax, and readability; including only essential text and graphics to avoid wordiness and visual clutter; and employing standards for bias, fairness, and sensitivity. (Renaissance Learning, 2014, p. 35)

Upon completion of the assessment, teachers and administrators had immediate access to view students' calculated scale scores (Renaissance Learning, 2015).

Both the survey and interview questions provided information on teacher and SLT perception of LLI. The researcher developed the 18-item survey in *Qualtrics* (See Appendix C) and then emailed the LLI teachers the survey link via email. According to Fraenkel, Wallen, and Hyun (2012), "a Likert scale is simply an attitude scale that consists of statements designed to measure the attitude of the respondent" (p. 127). Furthermore, Smart Survey Design (2015) supported the use of a Likert scale with the use of subjective data, such as viewpoints, feelings, or opinions. The Fidelity of LLI Implementation Tool established how closely teachers followed LLI as intended. The implementation fidelity tool consisted of 18 to 21 items, depending on the lesson observed, and used a four-point scale, ranging from zero (No Evidence) to three (Fidelity).

STAR Validity and Reliability

The Renaissance Learning and various independent groups, including the National Center of Intensive Intervention, the National Center on Response to Intervention, and the National Center on Student Progress Monitoring, found the STAR Reading Assessment to be valid and reliable (as cited in Renaissance Learning, 2013). Renaissance Learning and various independent researchers tested the validity and

reliability of the STAR Reading Assessment. Researchers established the construct validity, the overarching gauge for evaluating a test, by analyzing the data of the STAR Reading assessment with the data of the Degrees of Reading Power comprehension assessment (Renaissance Learning, 2015). Developers of Renaissance Learning (2015) observed a raw correlation of 0.89 and an adjusted correlation of 0.96 between the two tests (p. 61). Researchers compared the STAR Reading Assessment to the Stanford Achievement Test, Ninth Edition (SAT9), and found the average correlation was 0.82 (Renaissance Learning, 2015, p. 91); and in second grade, 0.73 (Renaissance Learning, 2015, p. 79). Renaissance Learning applied the generic reliability estimation method to compute the internal consistency reliability for the STAR Reading assessment for each grade (Renaissance Learning, 2015). The results indicated an overall reliability of 0.95, with a sample size of 69,738 (Renaissance Learning, 2015, p. 51); and for second grade the reliability was 0.90, with a sample size of 10,132 (Renaissance Learning, 2015, p. 53).

Research Participants

The secondary data consisted of 2nd grade student's pre- and post-STAR Reading scores from 19 of the 21 elementary schools who implemented LLI (see Table 4). The researcher did not use data from two of the 21 elementary schools, due to the fact one school had no 2nd graders and the other school had no 2nd graders who received LLI. Of the 761 2nd grade students, 222 students received LLI.

Table 2

Number of 2nd Grade Students by School

School	2nd Grade Enrollment	Number of 2nd grade LLI students
1	52	14
2	47	17
3	35	9
4	26	9
5	39	10
6	19	0
7	46	11
8	30	6
9	38	9
10	32	7
11	40	12
12	47	13
13	38	10
14	40	11
15	32	12
16	57	15
17	40	13
18	40	13
19	52	21
20	0	0
21	30	10
Total	761	222

Note: School and district information obtained from Missouri Department of Elementary & Secondary Education, 2016a.

The researcher sent 52 electronic surveys to potential participants in which approximately 51% (n = 21) of LLI teachers completed the survey, allowing the mixed-methods study to exceed the definition of a qualitative study. According to Fraenkel,

Wallen, & Huhn (2012), "in qualitative studies, the number of participants in a sample is usually somewhere between 1 and 20" (p. 103). Based on the data obtained from the survey of participating LLI teachers (n = 21), most of the LLI teachers had teacher certification (71.43%) (see Table 5).

Table 3

Respondent Percentage of Teacher Certification Level of LLI Participants (n=21)

Certification Level	Percent Responded
Certified	71.43%
Non-Certified	28.57%

However, only a few of the LLI teachers had Reading Certification (19.05%) (see Table 6).

Table 4

Respondent Percentage of Reading Certification Level of LLI Participants (n=21)

Reading Certification Level	Percent Responded
Reading Certification	19.05%
Non-Reading Certification	80.95%

Over half of the LLI participates had taught for 11 or more years (52.38%) (see Table 7). Of the 21 LLI teachers who responded, 12 indicated an interest to provide more information regarding the perception of LLI and agreed to participate in a follow-up interview. However, the researcher only interviewed 10 LLI teachers, due to availability. The researcher also conducted interviews with selected SLT members of the 21 schools in the study (n = 10).

Table 5

Demographic Characteristics of Years of Teaching LLI Participants (n=21)

Years of teaching	Percent Responded
Less than 1 year	0
1 – 5 years	4
6 – 10 years	6
11 – 15 years	6
More than 15 years	5

Relationship to Researcher

The researcher was the Principal at one of the Elementary schools where two of the participants worked. Although, the researcher was not the evaluator of the two participants, to protect the integrity of the research and reduce coercion, the researcher removed identifying information from the survey after obtaining information used only to contact the participant for a follow up interview and/or classroom observation. In the district, all LLI teachers reported directly to the Coordinator of School Intervention Programs. The Director of Research and Evaluation within the researched school district provided the de-identified reading scores to the researcher for analysis upon request.

Procedure

Prior to starting the study, the researcher received university IRB approval and permission from the school district to conduct the study. After obtaining the list of LLI teachers, every LLI teacher received an email, which explained the study, clarified there were no anticipated risks associated with the study, gained consent, and provided the link to the survey.

Completing the survey was voluntary and each participant had the option to not participate or withdraw from the study. In addition, each participant could opt out of answering any question without penalty. To protect the participant's identity, the survey did not require the participant's name, nor would the participant's name appear in any publication resulting from the study; all information obtained remained in a locked location.

At the end of the survey, the participant had the option to provide a contact email address to participate in an interview and/or a classroom observation. Once a minimum of 21 participants completed the survey, the researcher emailed all participants who provided a contact email address and agreed to have an interview and/or classroom observation. An agreed upon time and date was set and each participant completed a consent form prior to the interview and/or classroom observation. In addition, the researcher contacted the SLT members, explained the study, and requested participation. An agreed upon time and date was set and each participant completed a consent form prior to the interview.

Additionally, the researcher developed interview questions (see Appendix D & Appendix E) for the LLI teachers and the SLT members. Both the LLI teachers and the SLT members had the same interview questions. The interview questions consisted of six open-ended questions concerning how the participants perceived LLI. The researcher recorded each interview session with the Apple Voice Memo app. Then the researcher converted the recordings into a MP3 file and saved them to the cloud. The researcher transcribed the responses of each participant to a Microsoft Excel document to categorize the participant responses. Finally, the researcher coded and analyzed the responses to

determine common themes and categorized the responses to identify relevance to the study's research questions.

Upon running the *Qualtrics* report on the survey results, 12 of the participants agreed to an interview and one agreed to an observation. The interview consisted of a 30-minute block of time with six questions related to how LLI teachers perceived LLI (see Appendix D). Since the original research design included a minimum of six classroom observations, the researcher contacted Academic Instructional Coaches, a non-evaluative district employee, to ask the LLI teacher if the researcher could observe a lesson. The researcher obtained consent to observe five additional classrooms. The researcher observed six LLI teachers for one 30-minute LLI lesson to a group of students. To gauge the fidelity of implementation, the researcher used Fountas and Pinnell's Fidelity of LLI Implementation Tool (see Appendix F). The researcher marked the teacher on a four-point scale; which ranged from zero (no evidence) to three (fidelity). The researcher was not the evaluator for any participant observed and did not place any identifiers on the Fidelity of LLI Implementation Tool.

All second-grade students, within the researched district, participated in the computerized STAR Reading Assessment August 2016 and again in May 2017, as a regularly-scheduled district reading assessment to determine students' reading levels. Data stored on the Renaissance Learning web-based system served as secondary pre- and post-data. The researcher received the de-identified secondary data from the researcher's district Assessment Department. The coding included the separation of the student data into two groups – students who received LLI and students who did not receive LLI, and data grouped students by school. This allowed the researcher to compare schools. The

coding process identified students according to letters and numbers; for example, ALS1 (school A LLI student #1) and ANLS1 (school A non-LLI student #1). The population included 370 second grade students, who received LLI in the researched district. The researcher conducted a stratified random sample to obtain data for analysis, with each school site represented as one stratum. The researcher used the proportionate stratified method to calculate the sample size of each stratum; a random sample from each stratum using Excel software generated a sample size of 222 students. The researcher performed a two-sample *t*-test for difference in means to determine potential differences in STAR scale score gains when analyzing student data in the two groups. In addition, the researcher used a Pearson Product Moment Correlation Coefficient (PPMCC) to determine if a relationship existed between the fidelity scores of the schools and the average gain of the LLI students.

Summary

Chapter Three provided background information on the researched school district. The researcher outlined the study's research design, method, participants, and procedure of the study. The purpose of this mixed-method research design was to determine a possible difference in STAR Reading scaled scores among 2nd grade students who received LLI and 2nd grade students who did not receive LLI, examine the perceptions of the LLI teachers and SLT members, and determine what level of fidelity teachers implemented LLI. The researcher used an LLI teacher survey, Fidelity of LLI Implementation Tool (Appendix F), LLI teacher interview (Appendix D), and SLT interview (Appendix E). Student data included pre- and post-STAR Reading scaled scores.

Chapter Four presents the statistical analysis of data for the hypotheses and qualitative analysis for the research questions developed for the mixed-method study. The researcher compared STAR Reading scaled scores of 2nd grade students who received LLI with those who did not receive LLI. The researcher then examined the fidelity of implementation of the LLI program in the researched school district. Finally, the researcher investigated the perceptions of the LLI program according to pertinent stakeholders. Chapter Five includes the conclusions of the research study and recommendations for future research.

Chapter Four: Results

Overview

The researcher examined LLI, a research-based program, then-currently implemented in an urban school district as a pull-out intervention to help increase student achievement for struggling readers. The researcher was interested in finding a research-based reading intervention program capable of meeting the needs of urban at risk-students. In addition, the researcher believed the study results contributed to the then-current literature to assist school district administrators in making informed decisions when selecting a reading intervention program to increase reading achievement. The purpose of the study was threefold: (1) to determine whether LLI led to a possible difference on STAR reading scale scores gained between 2nd grade students with reading difficulties who received LLI and 2nd grade students with reading difficulties who did not receive LLI; (2) to seek a possible relationship between LLI students' growth on STAR Reading scaled scores and fidelity of implementation; and (3) to examine the perceptions of LLI according to LLI teachers and SLT members.

The researcher utilized a mixed-method design to address the hypotheses and research questions, incorporating both qualitative and quantitative data. Qualitative data included responses to LLI teacher survey questions and interviews of LLI teachers and SLT members, for more in depth information. The researcher recorded, transcribed, analyzed, and categorized interview responses. Secondary quantitative data included STAR Reading pre-and post-scaled scores and observation of fidelity of LLI implementation. The researcher describes in Chapter Four the qualitative findings, according to the research questions and the quantitative findings, according to the null hypotheses.

Null Hypotheses and Research Questions

The researcher examined the following null hypotheses for this study:

Null Hypothesis 1: There is no difference in the individual STAR reading scaled score gained in 2nd grade students with reading difficulties who participate in LLI and 2nd grade students with reading difficulties who do not participate in LLI, as measured by pre-and post-scores on STAR reading assessment

Null Hypothesis 2: There is no relationship in the mean STAR reading scaled score gain in 2nd grade students with reading difficulties and the fidelity of implementation mean observation score.

Research Question 1: How do Leveled Literacy Intervention teachers perceive Leveled Literacy Intervention?

Research Question 2: How do SLT members perceive Leveled Literacy Intervention?

Qualitative Analysis

Research Question 1: How do Leveled Literacy Intervention teachers perceive Leveled Literacy Intervention?

The researcher chose an online survey and participant interviews as research tools to answer research question one. The LLI teacher online survey had a participation rate of 21 of 52 (40%) and participant interviews resulted in a participation rate of 10 of 21 (48%). Interviewing the LLI teachers provided the researcher with additional insight. The researcher analyzed the survey responses and interviews to identify common themes, as a method of organizing the content, as it pertained to research question one.

Three themes emerged from analyzing the data: (1) placement and exiting process, (2) student achievement, and (3) instructional decisions. First, the researcher coded the data with the letter P, for placement, when the interviewee mentioned the student selection process or the process for exiting students from LLI. Next, the researcher coded the data with the letter A, for student achievement, when the interviewee mentioned student progress, growth, and skills learned. Finally, the researcher coded the data with the letter I, for instructional decisions, when the interviewee mentioned collaborating with the classroom teacher, grouping students, added support, and additional services.

Twenty-one LLI teachers completed an online survey as a comprehensive measure of implementation and measuring perceptions of LLI (see Table 8). Most of the LLI teachers indicated a positive perception of the implementation of process within the school. Overall, LLI teachers were most likely to 'Agree' or 'Strongly Agree' with the statement, 'received adequate LLI professional development,' 'understood how to implement LLI,' 'implemented LLI with fidelity,' 'perceived LLI as positive related to student achievement,' 'had the necessary instructional materials needed to implement LLI with fidelity,' and 'felt supported from school administration'. Further, LLI teachers indicated the ability to address the needs of students using LLI, communicated with classroom teachers about students' academic progress, and perceived ongoing support if needed (85% 'Strongly Agree' or 'Agree').

Table 6

Percentages of LLI Teacher Survey

Survey question	SA	**A**	**D**	**SD**
I have received sufficient professional development to implement LLI.	52%	43%	0%	5%
I understand how to implement LLI.	81%	14%	0%	5%
I implement LLI with fidelity.	71%	24%	0%	5%
LLI has increased student achievement.	38%	57%	0%	5%
I am able to address the individual needs of students using LLI.	35%	50%	10%	5%
Instructional materials needed to implement LLI with fidelity are provided.	57%	38%	0%	5%
I communicate with classroom teachers regarding the academic progress of students.	48%	38%	10%	5%
I feel supported by administration.	58%	38%	0%	5%
If I have questions or concerns about LLI, I feel I can receive support.	35%	50%	10%	5%
The administration protects the time needed to implement LLI daily.	33%	52%	0%	14%

Note. SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree

All respondents reported, 'they would recommend LLI to other educators' (see Table 9). LLI teacher number two stated, 'we saw progress at our school and I believe it was because LLI is a well thought-out and put together system.' Furthermore, LLI teacher number five reported, 'I think LLI is an amazing program and has played a vital role in helping the students improve their reading.'

Table 7

LLI Teacher Recommendation Response

Item	Yes	No
Would you recommend LLI to other educators?	100%	0%

The responses in Table 10 listed how LLI teachers identified the process for selecting students to receive LLI. Two of the 10 (20%) LLI teachers administered the Benchmark Assessment System to the entire 1st through 3rd grade population to identify students for LLI; whereas eight of the 10 (80%) LLI teachers administered the Benchmark Assessment System to only students reading below grade level, based on other assessments. All 10 (100%) LLI teachers noted a lack of inclusion for those students who already received special education services for LLI. Nine of the 10 (90%) participants selected only the lowest preforming students for LLI.

Table 8

LLI Teacher's Interview Responses Related to Student Screening and Placement

LLI Teacher No.	Interview Responses
3	'Upon entering the new school year all students are assessed for their current reading levels, through teacher assessments and/or the district assessment. Once the school has completed all testing, students who show significant struggles in reading and who are not receiving any other interventions, are then tested through the LLI Benchmark Assessment System. The lowest performing students are then selected for LLI.'
4	'In August, the students in first and second grade were administered the Benchmark Assessment System. If a child's instructional level is below grade level according to the Fountas and Pinnell instructional level expectations for reading and do not receive additional services, then they are identified as students who need reading intervention. Students with the lowest scores are placed in LLI.'
6	'We do BAS benchmark testing at the beginning of the school year. . . I assess every student 1st – 3rd grade. We place students who read on levels B or C and don't receive special education services in LLI at the beginning of the year… Instead of taking students reading on level AA or A at the beginning of the year, we wait until later in the year to place them.'

Table 10 continued.

9	'Students who are not reading on grade level based on STAR Reading scores and are not in any other reading intervention program or in special education is administered the Benchmark Assessment System. Students are then selected and grouped in LLI based on their needs.'

The responses in Table 11 noted the LLI teacher's criteria for exiting a student from LLI. Nine of the 10 (90%) LLI teachers discussed analyzing student data from multiple sources to determine if the student was on grade level prior to exiting them from the LLI program. However, only two of the 10 (20%) LLI teachers mentioned asking for input from the classroom teacher when deciding to exit a student. Three of the 10 (30%) LLI teachers noted if students had not made adequate progress after 18 weeks of the program, the students exited the LLI program. The LLI teachers then referred the students for special education services. LLI teacher number four had to exit a student from the program, even though the student was not reading on grade level. The teacher stated, 'Although the student wasn't on grade level, the student was more advanced than the other three students which caused the other three students to not receive the support they needed.'

The LLI teacher's feedback regarding LLI's implementation and student achievement was mostly positive (see Table 12). Ten of the 10 (100%) participants believed student literacy and student attitudes improved from receiving LLI. LLI teacher number nine found it more difficult to exit 3rd and 4th grade students from LLI on grade level. The teacher stated, 'The older the students get, the harder it is to move them.' Seven of the 10 (70%) participants discussed the increase in students' reading confidence leading to an increase in student achievement due to multiple opportunities of success during LLI.

Table 9

LLI Teacher's Interview Responses Related to Exiting Students

LLI Teacher No.	Interview Responses
3	'Students are exited from the Leveled Literacy Intervention program if they have made enough progress to reach grade-level competencies. This is based on running records, observing reading behaviors, STAR data, and benchmark assessments, as well as, communication with their teacher.'
6	'A student may exit out of the LLI program… if they are determined to be reading on grade level. I look at multiple sources of data (STAR, running records and benchmark assessments) to support that they are on grade level before I exit them out of the program.'
7	'Through the use of progress monitoring (running records and STAR assessment) we are able to see the student's growth or if they are making progress and in what areas. Once students reached their individual goal, reading on grade level, and maintain it for a while, then they can exit out of the program.'
10	'I keep them until they are on level. I use running records to decide if they are on reading on grade level. After 18 weeks, if a student is not on grade level, the classroom teacher and I will discuss referring the student for special education testing.'

Reutzel and Cooter (2013) noted the important role motivation had on reading achievement. Likewise, Beck (2014) indicated when struggling students experienced success at reading, self-efficacy increased and students became more motivated to read and more successful.

Table 10

LLI Teacher's Interview Responses Related to Student Achievement

LLI Teacher No.	Interview Responses
2	'I was able to see … how effective the system was. Most of my students made progress and several surpassed my expectations. Just as I was seeing progress so were my students. The more they caught their mistakes and saw their own personal growth, the more enthusiastic they became. They began to get a sense of understanding and not just thinking they couldn't do it or that this is too hard. My students became more confident and more willing to at least try to decode unknown words through several of the strategies we worked on daily. They would even come back and tell me how they used a particular strategy in their classroom on a test or for homework.'
5	'I see the growth and progress daily. Most of the students in the program score 95% or above for accuracy and for comprehension a satisfactory or above. I know student achievement is based on student running records, anecdotal notes, benchmark assessments, and STAR data but most importantly, I see the level of confidence in students increase and they start loving to read the books.'
7	'In my experience, the LLI program has had a positive effect on student achievement and growth. A majority of the students' STAR scores increased and all of the students that went through the LLI program this year increased their reading level. I also see the student's confidence in themselves and their reading has grown as they move throughout the program.'
9	'I have had a lot of 1st and 2nd grade students exit the program reading on grade level. Classroom teachers have told me they notice my students using strategies they have learned in LLI, when reading difficult text.'

The responses listed in Table 13 describe how the LLI teacher's school used student LLI data to guide instructional decision-making. Ten of the 10 (100%) LLI teachers discussed using the LLI data daily, in some form to make instructional decisions during planning and during the actual lessons. Also, 10 of the 10 (100%) LLI teachers

reported sharing student's LLI data with classroom teachers to use for grouping students in guided reading or small group instruction.

Table 11

LLI Teacher's Interview Responses Related to Instructional Decision-Making

LLI Teacher No.	Interview Responses
1	'I use the data to make daily instructional decisions, from what prompts to use to what word work to use. Classroom teachers use the data to group their students for guided reading. I also collaborate with the classroom teachers to support them on how to address student's needs based on the data.'
4	'I use the data to determine LLI groups, to move students to a higher or lower group, to identify what skills students need extra support on, and to prompt students based on their errors. The teachers and I collaborate about student's progress and what areas teachers can work on with the students in the classroom, so we are working on the same skills.'
5	'I share my data with all the teachers at the beginning of the year, because I assess all the students. They use it to help them form guided reading groups. Throughout the school year, during our PLC meetings we analyze student data and I share student's LLI data with the classroom teachers and provide instructional strategies needed to support the student's needs. When planning daily lessons, I am constantly using LLI data.'
8	'Teachers use the data in grouping students; for guided reading and instructional groups and meeting them where they are. The LLI data also helps teachers see which areas students need support. We also use the data in the RTI process as a base for additional testing.

Research Question 2: How do SLT members perceive Leveled Literacy Intervention?

The researcher chose participant interviews as the research tool to answer research question two. The researcher interviewed 10 SLT members. Interviewing the

SLT members provided the researcher with additional insight. The researcher analyzed the interviews to identify common themes, as a method of organizing the content, as it pertained to research question two.

The same three themes emerged from analyzing the data: (1) placement and exiting process, (2) student achievement, and (3) instructional decisions. Therefore, the researcher coded the data the same as the LLI teachers' data. First, the researcher coded the data with the letter P, for placement, when the interviewee mentioned the student selection process or the process for exiting students from LLI. Next, the researcher coded the data with the letter A, for student achievement, when the interviewee mentioned student progress, growth, and skills learned. Finally, the researcher coded the data with the letter I, for instructional decisions, when the interviewee mentioned collaborating with classroom teacher, grouping students, added support, and additional services.

The responses in Table 14 revealed how SLT members identified the process for selecting students to receive LLI. One of the 10 (10%) SLT members' school administered the Benchmark Assessment System to the entire 1st through 3rd grade population to identify students for LLI; whereas nine of the 10 (90%) SLT members' school administered the Benchmark Assessment System to only students reading below grade level based on other assessments. All 10 (100%) SLT members noted the LLI teacher did not consider students who already received special education services for LLI. Ten of the 10 (100%) participants only selected the lowest preforming students for LLI.

Table 12

SLT members' Interview Responses Related to Student Screening and Placement

SLT Member No.	Interview Responses
4	'Our school's process of selecting students to receive LLI is to assess all students in 1st – 3rd grade, using the Benchmark Assessment System. Also, end of year Star Reading scores are compared with beginning of year Star Reading scores. We also employ teacher-made assessments and recommendations. This helps to identify students instructional and independent reading level, as well as, identify students reading 1 or more grade levels behind. Our lowest performing students receive LLI, unless they are already receiving special education services.'
7	'Every student takes the STAR reading assessment at the beginning of the school year. Our LLI teacher administers the Benchmark Assessment System to students reading below grade level or teacher requested, but do not receive other services (Special education or small group pull-out intervention). The LLI teacher starts with the students farthest behind in reading.'

The responses in Table 15 noted the SLT member's school criteria for exiting a student from LLI.

Table 13

SLT members' Interview Responses Related to Exiting Students

SLT Member No.	Interview Responses
8	'We exit students out of LLI once they are reading on grade level and/or beyond and is proficient in comprehending and summarizing stories using complete sentences. We use the Benchmark Assessment System to verify that students are reading at their current grade level and/or beyond. However, STAR data and classroom teacher input is considered before exiting the student.'
10	'The LLI teacher and the homeroom teacher determine the goal for each student to reach in order to exit the program. The goal is usually a little above grade level, so the student wont regress without the intervention. Once the student has met the goal, they are exited from LLI.'

Eight of the ten (80%) SLT members discussed analyzing student data from multiple sources to determine if the student is on grade level prior to exiting them from the LLI program. Seven of the 10 (70%) SLT members mentioned asking for input from the classroom teacher when deciding to exit a student.

The SLT members' feedback of LLI's improvement on student achievement was mostly positive (see Table 16). Ten of the 10 (100%) participants believed student literacy improved from receiving LLI. However, SLT member number three found a few students increased enough to exit out of LLI, because the students were reading on grade level based on the Benchmark Assessment System but struggled after being out of the program. The SLT member stated, 'The student's reading level would increase, be exited it from LLI, but was still behind the majority of the class, which caused them to not continue to make the progress they needed.'

Table 14

SLT members' Interview Responses Related to Student Achievement

SLT Member No.	Interview Responses
1	'In my opinion students who participate in the LLI program improve their grade level reading. They seem to get better at comprehending what they read and answer questions with great detail. They also seem better at making inferences regarding what they read and make text-text, text-self, text-world connections. Our data from the Benchmark Assessment System shows most students made great gains.'
9	'When looking at the LLI data, our students in LLI are showing growth. I have only noticed a few students who were not progressing at the trajectory needed to reach their goal in the allotted time (about 18 weeks). For those students, our team meets to discuss other interventions or referring for special education testing. However, most of the students who receive LLI, seem to enjoy going to LLI and uses the strategies learned in LLI to decode unknown words.'

The responses in Table 17 listed how the SLT members' schools used student LLI data to guide instructional decision-making. Ten of the 10 (100%) SLT members discussed sharing student's LLI data with classroom teachers to use for grouping students in guided reading. Two of the 10 (20%) SLT members discussed using the LLI data daily, in some form to make instructional decisions during planning and during the actual lessons.

Table 15

SLT members' Interview Responses Related to Instructional Decision-Making

SLT Member No.	Interview Responses
2	'The LLI teacher shares student's progress and assessment data with classroom teachers. Teachers use the data to help develop guided reading groups. Teachers are also provided with leveled readers for students participating in the LLI program that are utilized during guided reading lessons in the regular classroom.'
6	'Data is shared and analyzed with the coach, LLI coordinator and the teacher to support the placement, movement, pace and differentiated learning in both the LLI class and the regular classroom. Guided reading groups are formed using several data sources including LLI data.'

Quantitative Analysis

Null Hypothesis 1: There is no difference in the individual STAR reading scaled score gained in 2nd grade students with reading difficulties who participate in LLI and 2nd grade students with reading difficulties who do not participate in LLI, as measured by pre-and post-scores on STAR reading assessment.

The researcher examined STAR reading scale scores gained in 2nd grade students with reading difficulties who participated in LLI and 2nd grade students with reading difficulties who did not participate in LLI to determine a possible difference in STAR

reading scale scores gained. As discussed in Chapter Three, the researcher used the beginning of the year STAR reading scale scores as pre-scores and end of the year STAR reading scale scores as post-scores. The difference between the pre- and post-scale scores indicated the amount of gains for each student.

The researcher conducted a two-sample *t*-test for difference in means comparing STAR scale score gains of the 2nd grade students with reading difficulties who received LLI intervention to the 2nd grade students with reading difficulties who did not receive intervention. A preliminary test of variances revealed the variances were not equal (see Table 20). There was not a significant difference between the growth of the LLI students (M = 87.290, SD = 72.640) and the growth of the non-LLI students (M = 86.307, SD = 77.268); $t(221) = 0.150$, $p = 0.8808$. There was not enough evidence for the researcher to reject the null hypothesis, which suggested no difference in the growth between the two groups of students.

Table 16

T-Test LLI Students and Non-LLI Students

	LLI	Non-LLI
Number	222	324
Mean	87.290	86.307
Standard Deviation	72.640	77.268
df	221	
P-value (two-tail)	0.2417	
t	0.510	

Null Hypothesis 2: There is no relationship in the mean STAR reading scaled score gain in 2nd grade students with reading difficulties and the fidelity of implementation mean observation score.

The Fidelity of LLI Implementation Tool involved a targeted, 30-minute observation of LLI implementation (n = 10 observations). Table 18 illustrates the frequencies for each item on the Fidelity of LLI Implementation Tool, as observed during the visits. The results indicated over 90% of the time the researcher rated 16 of the 18 components as 'Approaching Fidelity' or 'Fidelity'. The highest rated lesson components consisted of the following: use lesson goals to plan, familiarize the student with the meaning of the text, scaffold the child's use of meaning, language, and visual information in text, have students read the entire text softly or silently, samples oral reading and support effective problem-solving strategies, invites students to talk about the meaning of the text, guides children in 'hands-on' word work, and uses magnetic letters, word and picture cards to reinforce letter words (M = 3.0). The lowest rated lesson component included 'uses language from *When Readers Struggle* to expand students' thinking' (M = 1.5). Overall, the average rating across all lesson components of the Fidelity of LLI Implementation Tool was 2.72.

The data in Table 19 showed the average fidelity score for the LLI teachers observed teaching a 30-minute LLI lesson. The researcher rated each teacher from zero (no evidence) to three (fidelity) on each lesson component and recorded the total average of fidelity for each teacher. All 10 LLI teachers averaged between "Approaching Fidelity" and "Fidelity".

Table 17

Summary of Fidelity of LLI Implementation Tool Ratings (n=10)

Item	0	1	2	3	Average Fidelity Score
Goals for Lesson					
Teacher uses the lesson goals to plan.	0%	0%	0%	100%	3.0
Rereading Books					
Teacher invites students to reread 2-3 previously read books.	0%	10%	10%	80%	2.7
Teacher utilizes language to teach for effective strategic actions.	0%	20%	40%	40%	2.2
Phonics/Word Work					
Teacher uses concise language to introduce a phonics principle.	0%	0%	20%	80%	2.6
Teacher uses a visual to highlight the principle	10%	0%	0%	90%	2.7
New Book					
Teacher familiarizes the student with the meaning of text.	0%	0%	0%	100%	3.0
Teacher scaffolds the child's use of meaning, language, and visual information in text.	0%	0%	0%	100%	3.0
Teacher adjusts the support needed for students to process the text	0%	0%	20%	80%	2.8
Students read the entire text softly or silently.	0%	0%	0%	100%	3.0
Teacher samples oral reading and support effective problem-solving strategies	0%	0%	0%	100%	3.0

Continued

Table 19 continued.

Teacher refers to *Prompting Guide,* for helpful language while students read the text.	0%	10%	20%	70%	2.4
Teacher invites students to talk about the meaning of the text.	0%	0%	0%	100%	3.0
Teacher looks for evidence of student's ability to think about the text.	0%	0%	20%	80%	2.7
Teacher uses language from *When Readers Struggle* to expand student's thinking.	30%	10%	30%	30%	1.5
Teacher selects a specific teaching point to explicitly teach for effective strategic actions.	0%	0%	10%	90%	2.9
Teacher uses *Prompting Guide,* for helpful language for teaching points.	0%	10%	20%	70%	2.5
Letter/Word Work					
Teacher guides children in "hands-on" word work.	0%	0%	0%	100%	3.0
Teacher uses magnetic letters, word and picture cards to reinforce letter words.	0%	0%	0%	100%	3.0

Note. 0 = No Evidence; 1 = Some Evidence; 2 = Approaching Fidelity; 3 = Fidelity

Table 18

LLI Teacher Fidelity of Implementation Tool Mean Score (n=10)

LLI Teacher	Mean Score
1	2.67
2	2.94
3	2.72
4	3.00
5	2.78
6	2.89
7	2.28
8	2.78
9	2.72
10	2.44

The researcher examined mean STAR reading scaled scores gained in 2nd grade students with reading difficulties who participated in LLI and fidelity of implementation mean observation scores to analyze a possible relationship between the two variables. The researcher conducted a Pearson Product Moment Correlation Coefficient to determine if a relationship existed between the fidelity scores of the schools and the average gain of the LLI students. Figure 3 displays the results, which illustrated the Pearson Product Moment Correlation Coefficient (r = -0.042) did not prove to be significant, $t(8) = 0.119$, $p = 0.9083$ and revealed no relationship existed between the variables.

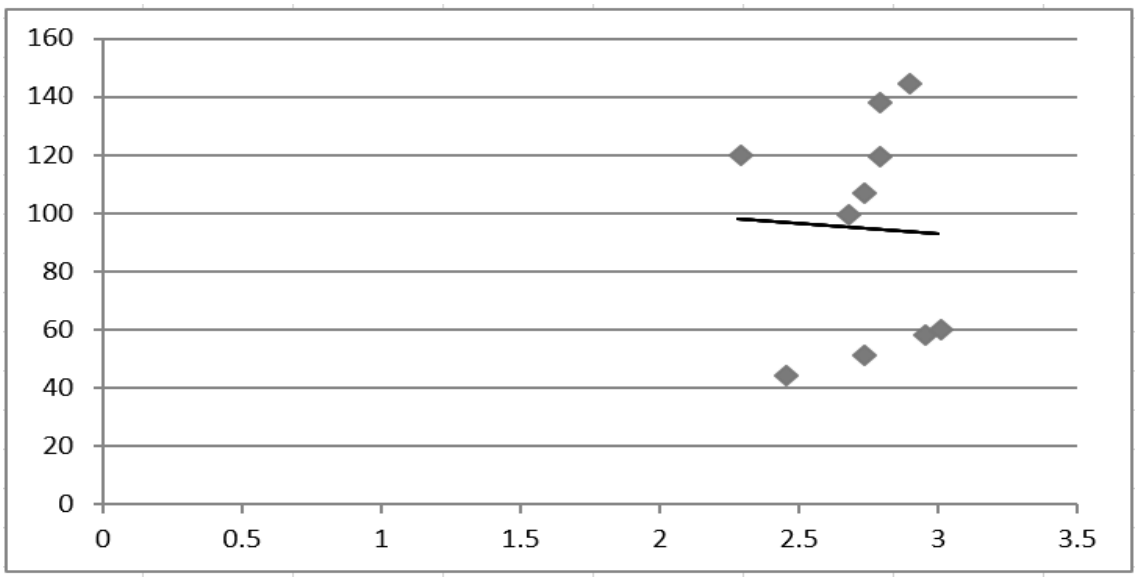

Figure 3. Correlation of Fidelity Scores and Average gain of Scale Score of the LLI Students.

Summary

Chapter Four presented the mixed methods approach of qualitative and quantitative data collected for the study. LLI teacher survey responses, both LLI and SLT interview responses, fidelity of implementation observations, and STAR reading scale scores gained supported findings for the research questions and null hypotheses. The following three themes emerged from analysis of the data: (1) placement and exiting process, (2) student achievement, and (3) instructional decisions. The results of the qualitative research revealed an overall satisfaction of the LLI program. On the survey and in the interviews, LLI teachers agreed LLI was beneficial to students and recommended LLI to other educators. Both Null Hypotheses were not rejected, indicating no difference and no relationship. In Chapter Five, the researcher discusses the results of the study, implications and recommendations for school districts, along with future studies.

Chapter Five: Discussion and Reflection

Introduction

At the time of this writing, school districts constantly struggled and sought ways to narrow the achievement gap in literacy, and as early as prekindergarten as educators across the United States continuously searched for instructional strategies and programs to meet the needs of diverse learners (Gergersen & MacIntyre, 2014). To promote equitable educational opportunities and close the achievement gap, Congress enacted laws aimed to hold states, school districts, administrators, and educators accountable for student achievement (Braun et al., 2010; Chudowsky et al., 2009; EPERC, 2015; ESSA, 2015).

The researcher conducted this study to determine a difference in STAR reading scaled scores among 2nd grade students with reading difficulties who received LLI and a like group of 2nd grade students with reading difficulties who did not receive LLI. The researcher also examined the perceptions of the LLI teachers and SLT members on the LLI program. Additionally, the researcher conducted observations to determine fidelity of reading implementation. Furthermore, the researcher sought to analyze a possible relationship between the mean STAR reading scaled score gain and the fidelity of implementation. The researcher believed the findings from the study could possibly assist school district administrators in making informed decisions when selecting a reading intervention program to increase reading achievement.

To determine a difference in STAR reading scaled scores, the researcher analyzed the pre- and post-STAR reading scaled scores for struggling 2nd grade readers who received LLI and those who did not receive LLI. In addition, to determine a possible

relationship between student achievement and fidelity of implementation, the researcher examined the 2nd grade students who received LLI and the fidelity of implementation mean observation score. To gain a better understanding of the perceptions of the LLI teachers and SLT members, the researcher examined data from the LLI teacher's online survey and LLI teachers and SLT members' interview regarding implementation and their perception of LLI.

Research Questions and Hypotheses

The researcher examined the following two hypotheses and two research questions:

Hypothesis 1: There is a difference in the individual STAR reading scaled score gained in 2nd grade students with reading difficulties who participate in LLI and 2nd grade students with reading difficulties who do not participate in LLI, as measured by pre-and post-scores on STAR reading assessment.

Hypothesis 2: There is a relationship in the mean STAR reading scaled score gain in 2nd grade students with reading difficulties and the fidelity of implementation mean observation score.

Research Question 1: How do Leveled Literacy Intervention teachers perceive Leveled Literacy Intervention?

Research Question 2: How do SLT members perceive Leveled Literacy Intervention?

Discussion of Findings

Hypothesis 1: There is a difference in the individual STAR reading scaled score gained in 2nd grade students with reading difficulties who participate in LLI and 2nd

grade students with reading difficulties who do not participate in LLI, as measured by pre-and post-scores on STAR reading assessment.

The analysis and examination of the STAR reading data did not support Hypothesis 1. The *t*-test mean growth score of the LLI students was 87.290 and the non-LLI students was 86.307. Although the reading growth, pre- and post-STAR reading scaled scores did reveal an observable minor difference, no significant difference existed. The research findings were inconsistent with other studies concerning implementation of LLI to increase student outcomes (Ransford-Kaldon et al., 2013). The researcher believed the results supported the need for early identification of students struggling with early literacy skills and the importance of intervention as early as possible. As mentioned in Chapter Two, identifying students who were struggling readers early in elementary school and providing intervention immediately revealed an increase in academic outcomes (Catts et al., 2016).

Hypothesis 2: There is a relationship in the mean STAR reading scaled score gain in 2nd grade students with reading difficulties and the fidelity of implementation mean observation score.

Hypothesis 2 was not supported by the data. Through analyzing reading achievement scores and fidelity of implementation, utilizing a PPMCC, the researcher found no relationship between STAR reading scaled scores and fidelity of implementation of the LLI program. As the fidelity of implementation mean observation score increased, no positive or negative gain in the student STAR scaled score occurred.

Overall, the observation data suggested teachers implemented LLI with a high level of fidelity across the researched district. On the survey, 95% of the LLI teachers

perceived the training as adequate, understood how to implement LLI, and implemented the program with fidelity. Nearly all lesson components obtained high fidelity ratings in most of the observations conducted for the study. Additionally, data from the LLI fidelity tool indicated the lowest fidelity rating was the lack of utilizing the language from the supplemental, *When Readers Struggle: Teaching That Works*, guide. Furthermore, the results indicated a need for additional professional development on literacy strategies for both LLI teachers and classroom teachers. Strong evidence from studies showed evidence-based instructional strategies improved student achievement (Zinskie & Rea, 2016). Students' reading comprehension increased when teachers utilized proven instructional strategies and eliminated unsuccessful instructional strategies (Wieman, 2014).

Research Question 1: How do Leveled Literacy Intervention teachers perceive Leveled Literacy Intervention?

The researcher asked six specific questions during the interviews with 10 LLI teachers. All six questions evaluated LLI teacher perceptions about the LLI program. Overall, the LLI teachers in the study promoted LLI and believed the program increased students' literacy. LLI teachers conveyed an understanding of the components of LLI and how to implement the program; received the instructional materials needed to implement LLI; and felt supported from the district, LLI coordinator, building administrator(s), and classroom teachers. In addition, the LLI teachers reported not only did the students' reading level increase, based on the Benchmark Assessment Systems, students became more fluent readers, used strategies learned to help decode words, noticed and corrected mistakes while reading, and most importantly became more

confident in reading. Many LLI teachers noted the importance of the home component; where students received 'take-home' books to help build fluency and reinforce learning at home. LLI teachers also indicated students learned the routines quickly and had high engagement because of the fast-paced lessons. However, the LLI teachers struggled to complete the lessons in the recommended 30 minutes.

Research Question 2: How do SLT members perceive Leveled Literacy Intervention?

To gain the school leadership-level perspective of LLI implementation, the researcher asked the SLT members the same six questions as the LLI teachers regarding individual perceptions about the LLI in school. Survey results indicated the participating schools used similar criteria to determine the student selection and exit processes. The selection criteria included below grade level Benchmark Assessment System score; below grade level on STAR reading score, and students who received special education services. Whereas the exit criteria involved the LLI teachers using multiple sources, which included Benchmark Assessment System score, STAR reading score, running records, and teacher input. Although many SLT members believed LLI improved most students' reading levels, teachers exited some students who did not progress enough to meet the expected goal from the program and made recommendations for further intervention or starting the special education referral process.

Overall, the SLT members' perception of LLI was generally positive and they believed the program benefited struggling readers at school. SLT members noted, students enjoyed going to LLI and appeared engaged in the lessons. According to several SLT members, instructional strategies and prompts from LLI improved teachers' learning

and instruction in reading with struggling readers. Many SLT members used LLI teachers to provide professional development to classroom teachers on instructional strategies learned from LLI to support struggling readers in whole classroom settings and during PLC meetings to share instructional strategies with classroom teachers.

Program Recommendations for District

The study revealed no significant increase in students' reading on levels from receiving LLI nor a relationship between student outcomes and fidelity of implementation. However, the results suggested an increased level of literacy strategies and reading confidence levels. The researcher had recommendations for the researched school district; continued implementation of LLI which could improve instructional strategies and ultimately student achievement.

The researcher recommended when possible, the researched school district should identify and provide LLI to all students reading below grade level, starting in kindergarten. As mentioned previously, students who developed the core reading components early become proficient readers (Ellery, 2014; Stancel-Piatak, et al., 2013). Moreover, researchers agreed early identification and intervention was essential for struggling students to succeed in school and in life (Hall & Mahoney, 2013; Regan et al., 2015; Turse & Albrecht, 2015).

For LLI to lead to increased academic achievement in the researched school district, additional professional development opportunities on instructional reading strategies to address the varied needs of students for both LLI teachers and classroom teachers would need to occur. Fountas and Pinnell (2009) strongly recommended the *When Readers Struggle: Teaching That Works* guide, in conjunction with LLI and in

regular classrooms. Fountas and Pinnell (2009) also noted the importance of building consistency, “Both classroom and intervention teachers need to know that it is the combination of their efforts that will help struggling readers” (p. 1). In addition, ongoing and regular professional development for LLI teachers would help deepen teacher learning and skills and provide time for collaboration and reflection; consequently, increased student achievement.

Recommendations for Future Research

The researcher had several recommendations for future research to obtain new information and possibly improve results due to the unanticipated results of the study, particularly not finding a difference between students who received LLI and students who did not receive LLI. Future research should duplicate this study to analyze subgroups, such as gender and race. Fountas and Pinnell (2012) recommended 1st and 2nd grade students receive 18 weeks of LLI instruction. One limitation of the study was the number of days and length of time students received LLI instruction, due to student and teacher absences, delay in testing and placement, and school and district factors (e.g.; district-wide assessment days, school-wide events, holidays, and school administrators assigning LLI teachers to other duties). Therefore, future research on LLI should include more data collection on the number of days students received LLI instruction and the number of weeks each school implemented LLI.

Another limitation of the study was the researcher could not regulate administration of the STAR reading assessment, for which the school district had guidelines as to when schools must administer the assessments. Therefore, the researcher used the available STAR reading data provided by the researched district, which meant

the timing of exiting LLI and administration of the STAR assessment varied widely amongst the students. As a result, the LLI group of students may have exited from the program, and then, also received other supplemental literacy interventions prior to the Post-STAR assessment, which varied from school to school, thus limiting the findings. Hence, the researcher's recommendation to administer the post-test to the LLI and non-LLI students immediately following the LLI program.

As mentioned in Chapter Two, studies showed significant gains in both rural and suburban K-2 students' literacy skills, who participated in LLI (Harrison et al., 2008; Peterman et al., 2009; Ransford-Kaldon et al., 2011; Ransford-Kaldon et al., 2013). At the time of the study, Ransford-Kaldon et al. (2013) concluded LLI positively increased urban students' reading achievement, specifically in kindergarten and 1st grade. The researcher recommended additional qualitative research to evaluate LLI in K-2 grades in an urban school setting.

Conclusion

Extensive amounts of research documented the significance of providing early intervention to struggling students to improve long-term achievement (Scholin et al., 2013; Catts et al., 2016; Kieffer & Vukovic, 2013; Weddle et al., 2016). Furthermore, research showed students who obtained fundamental literacy skills, such as phonemic awareness, phonics, fluency, vocabulary, and comprehension, early become more successful learners (Stancel-Piatak et al., 2013). Conversely, students with limited basic literacy skills struggled to keep up with peers. Students unable to read at grade level fell further behind peers academically and continued to fall with each passing grade (Brown, 2014; Kaminski et al., 2015; Stancel-Piatak et al., 2013; Vagi et al., 2017).

Research showed, with early intervention targeted to improve core reading skills, the achievement gap closes (Ransford-Kaldon, et al, 2013). The goal of LLI was to accelerate struggling students' progress with the intent to increase reading skills up to grade level, so early reading problems did not become long-term deficits (Fountas & Pinnell Literacy, 2017). Overall results based on five major then-current studies indicated LLI resulted in a neutral to positive relationship between LLI participates and student outcomes (Hanover, 2016).

The researcher sought to evaluate the LLI program in an urban school district to help close the achievement gap between students' reading levels and reading on grade level. The study attempted to determine if reading scores increased due to participating in LLI. In addition, the study attempted to establish a possible relationship between the increase in students' literacy skills and fidelity of implementation. The researcher analyzed qualitative and quantitative data, specifically LLI teacher survey data, LLI teacher and SLT member interview responses, fidelity of implementation tool, and pre- and post-STAR reading scaled scores, to determine to what extent LLI would increase struggling students' literacy skills. Although this study did not support the literature on significant reading gains for struggling readers who received the intervention compared to peers (Ransford-Kaldon et al., 2013), the study added to the body of research on teacher and administrator perceptions of the program and the researcher gained beneficial information to further consider regarding district implementation.

References

Abbott, M., Wills, H., Miller, A., & Kaufman, J. (2012). The relationship of error rate and comprehension in second and third grade oral reading fluency. *Reading Psychology, 33*(1), 104-132. doi:10.1080/02702711.2012.630613

Achieve. (2015, January). Closing the expectations gap [Press release]. Retrieved from http://www.achieve.org/top-state-education-policy-organizations-form-expert advisory-group-international benchmarking

Afflerbach, P. (2016). Reading assessment: Looking ahead. *The Reading Teacher, 69*(4), 413-419. Retrieved from http://dx.doi.org/10.1002/trtr.1430

Al Otaiba, S., Wagner, R. K., & Miller, B. (2014). "Waiting to fail" redux: Understanding inadequate response to intervention. *Learning Disability Quarterly, 37*(3), 129-133. doi:10.1177/0731948714525622

Al Otaiba, S., Wanzek, J., & Yovanoff, P. (2015). Response to Intervention. *European Scientific Journal, 1*(0), 260-264. doi:10.1080/08856257.2013.768452

Allington, R. L. (2006). *What really matters for struggling readers: Designing research based programs* (2nd ed.). Boston, MA: Allyn and Bacon.

Allington, R. L. (2013). What really matters when working with struggling readers. *The Reading Teacher, 66*(7), 520-530. doi:10.1002/TRTR.1154

American Academy of Special Education Professionals. (2018). Understanding Response to Intervention. Retrieved from http://aasep.org/professional development/board-certification-in-special-education-program/certificate-of-advanced-professional-development/understanding-response-to-intervention-rti/index.html

Anderson, S., Leithwood, K., & Strauss, T. (2010). Leading data use in schools: Organizational conditions and practices at the school and district level. *Leadership and Policy in Schools, 9*(3), 292-327. doi:10.1080/15700761003731492

Annie E. Casey Foundation. (2013a). *Early warning confirmed: A research update on third-grade reading.* Retrieved from http://www.aecf.org/resources/early-warning-confirmed/

Annie E. Casey Foundation. (2013b). Early warning! Why reading by the end of third grade matters. Retrieved from http://www.ccf.ny.gov/files/9013/8262/2751/ AECFReporReadingGrade3.pdf

Arden, S. V., Gandhi, A., Edmonds, R., & Danielson, L. (2017). Toward more effective tiered systems: Lessons from national implementation efforts. *Exceptional Children, 83*(3), 269-280. doi:10.1177/0014402917693565

Armbruster, B., Lehr, F., & Osborn, J. (2001). *Put reading first: The research building blocks for teaching children to read.* Jessup, MD: National Institute for Literacy.

Armbruster, B. B., Lehr, F., & Osborn, J. (2003). *Put reading first: The research building blocks for teaching children to read. Kindergarten through grade 3* (2nd ed.). Retrieved from https://files.eric.ed.gov/fulltext/ED458536.pdf

Association for Supervision and Curriculum Development. (n.d.). *Every Student Succeeds Act (ESSA): ESSA Implementation Resources for Educators.* Retrieved from http://www.ascd.org/ASCD/pdf/siteASCD/ policy/ESSA- Essentials-for-Educators.pdf

Association for Supervision and Curriculum Development. (2015). *Elementary and Secondary Education Act: Comparison of the No Child Left Behind Act to the Every Student Succeeds Act.* Retrieved from http://www.ascd. org /ASCD/pdf/ site ASCD/policy/ ESEA_NCLB_ ComparisonChart_2015.pdf

Au, W., & Gourd, K. (2013). Asinine assessment: Why high-stakes testing is bad for everyone including English teachers. *English Journal, 103*(1), 14-19. Retrieved from http://www.jstor.org/stable/24484054

Averill, O. H., Baker, D., & Rinaldi, C. (2014). A blueprint for effectively using RTI intervention block time. *Intervention in School and Clinic, 50*(1), 29–38. Retrieved from http://dx.doi.org/10.1177/1053451214532351

Baker, K., & Jakicic, C. (2012). *Common formative assessment: A toolkit for professional learning communities.* Bloomington, IN: Solution Tree Press.

Baines, L. A., & Stanley, G. K. (2004). High-stakes hustle; Public schools and the new billion-dollar accountability. *The Educational Forum, 69*(1), 8-15. Retrieved from https://doi.org /10.1080/ 00131720408984660

Baker, S. K., Smolkowski, K., Chaparro, E. A., Smith, J. L., & Fien, H. (2015). Using regression discontinuity to test the impact of a tier 2 reading intervention in first grade. *Journal of Research on Educational Effectiveness, 8*(2), 218-244. doi: 10. 1080/19345747.2014.909548

Bambrick-Santoyo, P. (2010). *Driven by data.* San Francisco, CA: Jossey-Bass.

Beach, K. D., & O'Connor, R. E. (2015). Early response-to-intervention measures and predictors of reading disability in the beginning of third grade. *Journal of*

Learning Disabilities, *48*(2), 196-223. Retrieved from https://doi.org/10.1177/0022219413495451

Beck, I. L., McKeown, M. G., & Kucan, L. (2013). *Bring words to life: Robust vocabulary instruction* (2nd ed.). New York, NY: The Guilford Press.

Beck, P. (2014). Multigenre text set integration: Motivating reluctant readers through successful experiences with text. *Journal of Reading Education, 40*(1), 12-19.

Berliner, D. (2011). Rational responses to high stakes testing: The case of curriculum narrowing and the harm that follows. *Cambridge Journal of Education 41*(3), 287-302. doi:10.1080/0305764X.2011.607151

Biegel, S., Kim, R., & Weiner, K. (2016). *Education and the Law (4th ed.).* St. Paul, MN: West Academic.

Bigham, G. D., & Riney, M. R. (2014). Trend analysis techniques to assist school leaders in making critical curriculum and instruction decisions. *Current Issues in Education*, *17*(1), 1–13. Retrieved from http://cie.asu.edu/ojs/index.php/cieatasu/article/view/1265

Bineham, S. C., Shelby, L., Pazey, B. L., & Yates, J. R. (2014). Response to Intervention: Perspectives of general and special education professionals. *Journal of School Leadership, 24*(2), 230-252. Retrieved from ERIC. (EJ1045480)

Björn, P. M., Aro M. T., Koponen, T. K., Fuchs, L. S., & Fuchs, D. H. (2016). The many faces of special education within RTI frameworks in the United States and Finland. *Learning Disability Quarterly, 39*(1), 58-66. doi:10.1177/0731948715594787

Black, P., & Wiliam, D. (1998). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan, 80*(2), 139–144. Retrieved from ERIC database: (EJ575146)

Blazer, C. (2011). *Unintended consequences of high-stakes testing*. Retrieved from Miami Dade School website: https://files.eric.ed.gov/fulltext/ED536512.pdf

Bloom, B. S. (1981). *All our children learning: A primer for parents, teachers, and other educators.* New York, NY: McGraw-Hill.

Bowey, J. A. (2006). Need for systematic synthetic phonics teaching within the early reading curriculum. *Australian Psychologist, 41*(2), 79-84. Retrieved from https://doi.org/10.1080/00050060600610334

Brady, S. (2011). Efficacy of phonics teaching for reading outcomes: Indications from post-NRP research. In S. Brady, D. Braze, & C. Fowler (Eds.), *Explaining individual differences in reading: Theory and evidence* (pp. 69–96). New York, NY: Psychology Press.

Braun, H., Chapman, L., & Vezzu, S. (2010). The Black-White achievement gap revisited. *Education Policy Analysis Archive, 18*(21), 1-99. Retrieved from https://epaa.asu.edu/ojs/article/view/772/855

Breiner, J. (2015). Is high-stakes testing the answer? *School Science and Mathematics, 115*(3). doi:10.1111/ssm.12112

Brown, A. B., & Clift, J. W. (2010). The unusual effect of adequate yearly progress: Evidence from school visits. *American Educational Research Journal, 47*(4), 774-798. doi:10.3102/0002831210374644

Brown, C. S. (2014). Language and literacy development in the early years: Foundational skills that support emergent readers. *Language and Literacy Spectrum, 24*(Spring), 35-49. Retrieved from https://files.eric.ed.gov/fulltext/EJ1034914.pdf

Bruhn, A. L., Woods-Groves, S., Fernando, J., Choi, T., & Troughton, L. (2017). Evaluating technology-based self-monitoring as a tier 2 intervention across middle school settings. *Behavioral Disorders, 42*(3), 119-131. Retrieved from https://doi.org/10. 1177/0198742917691534

Bruno, R., Ashby, S., & Manzo, F. (2012). *Beyond the Classroom: An Analysis of a Chicago Public School teacher's actual workday.* School of Labor and Employment Relations, University of Illinois at Urbana-Champaign. Retrieved from https://ler.illinois.edu/wp-content/uploads/2015/01/Teachers- Activity-Time-Study-2012-1-Final.pdf

Butler, S., Urrutia, K., Buenger, A., & Hunt, M. (2010). *A review of the current research on comprehension instruction.* Washington, DC: National Reading Technical Assistance Center. Retrieved from https://www2.ed.gov/programs/readingfirst/support/compfinal.pdf

Byrd-Blake, M., Afolayan, M., Hunt, J., Fabunmi, M., Pryor, B., & Leander, R. (2010). Morale of teachers in high poverty schools: A post-NCLB mixed methods analysis. *Education and Urban Society, 42*(4), 450-472. Retrieved from https://doi.org/10.1177/ 0013124510362340

Cain, K. (2006). Individual differences in children's memory and reading comprehension: An investigation of semantic and inhibitory deficits. *Memory, 14*(5), 553–569. doi:10.1080/09658210600624481

Cain, K., Oakhill, J., & Bryant, P. (2004). Children's reading comprehension ability: Concurrent prediction by working memory, verbal ability, and component skills. *Journal of Educational Psychology, 96*(1), 31–42. doi:10.1037/0022-0663.96.1.31

Calkins, L., Ehrenworth, M., & Lehman, C. (2012). *Pathways to the common core: Accelerating achievement*. Portsmouth, NH: Heinemann.

Callaghan, G., & Madelaine, A. (2012). Leveling the playing field for kindergarten entry: Research implications for preschool early literacy instruction. *Australasian Journal of Early Childhood, 37*(1), 13-23. Retrieved from ERIC database: (EJ978140)

Cantrell, S. C., Almasi, J. F., Carter, J. C., Rintamaa, M., & Madden, A. (2010). The impact of a strategy-based intervention on the comprehension and strategy use of struggling adolescent readers. *Journal of Educational Psychology, 102*(2), 257–280. doi:10.1037/a0018212

Carlisle, J. F., & Berebitsky, D. (2011). Literacy coaching as a component of professional development. *Reading and Writing: An Interdisciplinary Journal*, *24*(7), 773-800. doi:10.1007s/11145-009-9224-4

Carson, K. L., Gillon, G. T., & Boustead, T. M. (2013). Classroom phonological awareness instruction and literacy outcomes in the first year of school. *Language, Speech, and Hearing Services in Schools*, *44*(2), 147-160. doi:10.1044/0161-1461

Cassidy, J., Valadez, C. M., & Garrett, S. D. (2010). Literacy trends and issues: A look at the five pillars and the cement that supports them. *The Reading Teacher, 63*(8), 644-655. Retrieved from https://doi.org/10.1598/RT.63.8.3

Catts, H. H., Nielsen, D. C., Bridges, M. S., & Liu, Y. (2016). Early identification of reading comprehension difficulties. *Journal of Learning Disabilities, 49(5),* 451-465. doi:10.1177/0022219414556121

Center on Response to Intervention. (2014). Response to intervention glossary of terms. Retrieved from http://www.rti4success.org/sites/default/files/CenterOnRTI Glossary. pdf

Cervette, G. N., & Hiebert, E. H. (2015). The sixth pillar of reading instruction: Knowledge development. *Reading Teacher, 68*(7), 548-551. doi:10.1002/trtr.1343

Chandler, R. (2014). Teachers' beliefs about poverty and the impact on learning disabilities identification in a poor rural school district. *Rural Educator, 35*(3), 31-39. Retrieved from epubs.library.msstate.edu/index.php/ruraleducator/article/ download/ 343/344

Chingos, M. M. (2012). *Strength in numbers: State spending on K–12 assessment systems*. Washington, DC: Brown Center on Education Policy, Brookings Institution.

Christ, T., & Wang, X. (2010). Bridging the vocabulary gap. What research tells us about vocabulary instruction in early childhood. *Young Children, 65*(4), 84-91. Retrieved from https://www.jstor.org/stable/i40102794

Christopher, M. E., Miyake, A., Keenan, J. M., Pennington, B., DeFries, J. C., Wadsworth, S. J., . . . Olson, R. K. (2012). Predicting word reading and comprehension with executive function and speed measures across development: A latent variable analysis. *Journal of Experimental Psychology-General, 141*(3), 470–488. doi:10.1037/a0027375.

Chudowsky, N., Chudowsky, V., & Kober, N. (2009). State test score trends through 2007-2008: Are achievement gaps closing and is achievement rising for all? Retrieved from http://files.eric.ed.gov /fulltext/ED507909.pdf

Coburn, C. E., & Woulfin, S. (2012). Reading coaches and the relationship between policy and practice. *Reading Research Quarterly, 47*(1), 5-30. Retrieved from https://doi.org/10.1002 /RRQ.008

Colker, R. (2013). Politics trump science: The collision between no child left behind and the individuals with disabilities education act. *Journal of Law & Education, 42*(4), 585-631. Retrieved from ERIC database. (ED525078)

Common Core State Standards Initiatives. (2018). English language arts standards, anchor standards, college and career readiness anchor standards for reading. Retrieved from http://www.corestandards.org/ELA-Literacy/CCRA/R/

Cook-Harvey, C. M., Darling-Hammond, L., Lam, L., Mercer, C., & Roc, M. (2016). *Equity and ESSA: Leveraging Educational Opportunity Through the Every Student Succeeds Act*. Palo Alto, CA: Learning Policy Institute. Retrieved from https://learningpolicyinstitute.org/sites/default/files/product-files/Equity_ ESSA_REPORT.pdf

Correia, M. P. (2011). Fiction vs. informational texts: Which will kindergartners choose? *Young Children, 66*(6), 100–104. Retrieved from ERIC database. (EJ959814)

Cortiella, C., & Horowitz, S. H. (2014). *The state of learning disabilities.* Retrieved from National Center of Learning Disabilities website: https://www.ncld.org/wp-content/uploads/2014/11/2014-State-of-LD.pdf

Cosner, S. (2011). Teacher learning, instructional considerations and principal communication: Lessons from a longitudinal study of collaborative data use by teachers. *Educational Management Administration & Leadership, 39*(5), 568-589. doi:10.1177/1741143211408453

Coyne, M. D., Simmons, D. C., Hagan-Burke, S., Simmons, L. E., Kwok, O., Kim, M., . . . Rawlinson, D. M. (2013). Adjusting beginning reading intervention based on student performance: An experimental evaluation. *Exceptional Children, 80*(1), 25-44. Retrieved from https://doi.org/10.1177/001440291308000101

Crawford, L. (2014). The role of assessment in a Response to Intervention model. *Preventing School Failure, 58*(4), 230-236. doi:10.1080/1045988X.2013.805711

Cutting, L. E., & Scarborough, H. S. (2006). Prediction of reading comprehension: Relative contributions of word recognition, language proficiency, and other cognitive skills can depend on how comprehension is measured. *Scientific Studies of Reading, 10*(3), 277–299. doi: 10.1207/s1532799xssr1003_5

Dallas, W. P. (2017). Systemic sustainability in RtI using intervention-based scheduling methodologies. *Learning Disability Quarterly, 40*(2), 105-113. doi:10.1177/07319 48717690141

Damhius, C., Segers, E., & Verhoeven, L. (2014). Sustainability of breadth and depth of vocabulary after implicit versus explicit instruction in kindergarten. *International Journal of Disability, Development and Education, 61*(3), 194-211. Retrieved from https://doi.org/10.1080/1034912X.2014.932562

Darling-Hammond, L., Bae, S., Cook-Harvey, C. M., Lam, L., Mercer, C., Podolsky, A., & Stosich, E. L. (2016). *Pathways to new accountability through the Every*

Student Succeeds Act. Palo Alto, CA: Learning Policy Institute. Retrieved from https:// learningpolicyinstitute. org/sites/default/files/product-files/Pathways New-Accountability_Through_Every_Student_Succeeds_Act_04202016.pdf

Data Quality Campaign. (2012). *Focus on people to change data culture* (Annual Report). Retrieved from files/DFA 2012 %20Annual%20Report.pdf

David, J. L. (2011). Research says... High-stakes testing narrows the curriculum. *Educational Leadership, (68)*6, 78-80. Retrieved from ERIC database. (EJ1156814)

Dee, T. S., & Jacob, B. (2010). Evaluating NCLB. *Education Next, 10*(3), 54-61. Retrieved from ERIC database. (EJ910562)

Dee, T. S., Jacob, B., & Schwartz, N. L. (2013). The effects of NCLB on school resources and practices. *Educational Evaluation and Policy Analysis, 35*(2), 252-279. doi:1*0.3102/0162373712467080*

Del Campo, R., Buchanan, W. R., Abbott, R. D., & Berninger, V. W. (2014). Levels of phonology related to reading and writing in middle childhood. *Reading and Writing, 28*(2), 183–198. doi:10.1007/s11145-014-9520-5

Dell-Antonia, K. J. (2012, March 19). The link between reading level and drop-out rates. *New York Times.* Retrieved from http://www.nytimes.com

Demers, L. (2012). Leveled Literacy Intervention: Research and data collection project 2010-2011. Portsmouth, NH: Heinemann.

Dennis, D. V. (2016). Learning from the past: What ESSA has the chance to get right. *The Reading Teacher, 70*(4), 395-400. doi:10.1002/trtr.1538

Deno, S. L., & Mirkin, P. K. (1977). *Data-based program modification: A manual.* Reston, VA: Council for Exceptional Children. Retrieved from .gov/ fulltext/ED144270 .pdf

Denton, C. A., Nimon, K., Mathes, P. G., Swanson, E. A., Kethley, C., Kurz, T. B., . . . Shih, M. (2010). Effectiveness of a supplemental early reading intervention scaled up in multiple schools. *Exceptional Children, 76*(4), 394-416. Retrieved from https://doi.org/10.1177/001440291007600 402

Denton, C. A., Tolar, T. D., Fletcher, J. M., Barth, A. E., Vaughn, S., & Francis, D. J. (2013). Effects of Tier 3 intervention for students with persistent reading difficulties and characteristics of inadequate responders. *Journal of Educational Psychology, 105*(3), 633-648. doi:10.1037/a0032581

Dewitz, P., & Jones, J. (2013). Using basal readers: From dutiful fidelity to intelligent decision making. *The Reading Teacher, 66*(5), 391-400. doi:10.1002/TRTR.01134

Dougherty Stahl, K. A., Keane, A. E., & Simic, O. (2013). Translating policy to practice: Initiating RTI in urban schools. *Urban Education, 48*(3), 350–379. doi:10.1177/00420 85912451755

Drummond, K. (2014). *About reading disabilities, learning disabilities and reading difficulties.* Washington, DC: Reading Rockets.

DuFour, R. (2012). When districts function as professional learning communities. *School Administrator, 69*(1), 18-19. Retrieved from http://eds.a.ebscohost.com. Gate keeper2.lindenwood.edu/ehost/pdfviewer/pdfviewer?vid=9&sid=4927dd78-13aa-4dc8-9554-add7a3a29ff4%40sessionmgr4004&hid=4203

DuFour, Rbt, DuFour, R., Eaker, R., & Many, T. (2010). *Learning by doing: A handbook for professional learning communities at work.* Bloomington, IN: Solution Tree.

DuFour, R., & Fullan, M. (2013). *Cultures built to last: Making PLCs systemic*. Bloomington, IN: Solution Tree.

DuFour, R., & Mattos, M. (2013). How do principals really improve schools? *Educational Leadership, 70*(7), 34–40. Retrieved from https://www.cisdctl.com/ uploads/1/3/3/4/133401/ st-dufour-mattos-article.pdf

Editorial Projects in Education Research Center. (2015). Issues A-Z: No Child Left Behind: An overview. *Education Week.* Retrieved from ew/ section/multimedia /no-child-left-behind-overview-definition-summary.html/

Egalite, A. J., Fusarelli, L. D., & Fusarelli, B. C. (2017). Will decentralization affect educational inequity? The Every Student Succeeds Act. *Educational Leadership, Policy, and Human Development, 53*(5), 757-781. Retrieved from 10.1177/ 0013161X17735869

Ehri, L. C. (2005). Learning to read words: Theory, findings, and issues. *Scientific Studies of Reading, 9*(2), *1*67–188. doi:10.1207/s1532799xssr0902_4

Ehri, L. C. (2014). Orthographic mapping in the acquisition of sight word reading, spelling memory, and vocabulary learning. *Scientific Studies of Reading, 18*(1), 5–21. doi: 10.1080/10888438.2013.819356

Ehri, L. C., Nunes, S. R., Stahl, S. A., & Willows, D. M. (2001). Systematic phonics instruction helps students learn to read: Evidence from the National Reading Panel's meta-analysis, *Review of Educational Research, 71*(3), 393-447. Retrieved from http://www.dyslexie.lu/JDI_02_02_04.pdf

El Moussaoui, S. (2017). The Every Student Succeeds Act and its impact on vulnerable children. *Journal of Law and Education, 46*(3), 407-413. Retrieved from https://www.questia.com/library/journal/1P4-1933231201/chalk-talks- the-every-student-succeeds-act-and-its

Elgart, M. A. (2016). Creating state accountability systems that help schools improve. *Phi Delta Kappan, 98*(1), 26–30. doi:10.1177/0031721716666050

Ellery, V. (2014). *Creating strategic readers: Techniques for supporting rigorous literacy instruction.* Huntington Beach, CA: Shell Educational Publishing.

Erchul, W. P. (2015). Put me in, coach: Observations on selected studies implementing supportive interventions to teachers. *School Mental Health, 7*(1), 74–79. Retrieved from https://doi.org/10.1007/s1231

Ervin, R. A. (n.d.). Considering tier 3 within a response-to-intervention model. Retrieved from http://www.rtinetwork.org/essential/tieredinstruction/tier3/consideringtier3

Every Student Succeeds Act. (2015). Pub. L. No. 114-95. Retrieved from .congress.gov/114/plaws/publ95/PLAW-114publ95.pdf

Fountas, I. C., & Pinnell, G.S. (2009). *Guide for Professional Development: When readers struggle: Teaching that works.* Portsmouth, NH: Heinemann.

Fountas, I. C., & Pinnell, G. S. (2011a). *Leveled literacy intervention: Research and data collection project 2009-2010.* Portsmouth, NH: Heinemann.

Fountas, I. C., & Pinnell, G. S. (2011b). *The continuum of literacy learning, grades PreK-8.* Portsmouth, NH: Heinemann.

Fountas, I. C., & Pinnell, G.S. (2012). *The critical role of text complexity in teaching children to read.* Portsmouth, NH: Heinemann.

Fountas, I. C., & Pinnell, G. S. (2013) Leveled literacy intervention: Overview. Retrieved from http://www.heinemann.com/fountasandpinnell/lli_overview.aspx

Fountas & Pinnell Literacy. (2017). Intervention FAQ's. Retrieved from https://fountasandpinnell.com/faqs/intervention

Fraenkel, J., Wallen, N., & Huhn, H. (2012). How to design and evaluate research in education (8th ed.). New York: Mc Graw Hill.

Fuchs D., & Fuchs L. S. (2017). Critique of the national evaluation of the Response to Intervention: A case for simpler frameworks. *Exceptional Child. 83*(3), 255–268. doi:10.1177/0014402917693580

Fuchs, D., Fuchs, L. S., & Compton, D. L. (2012). Smart RTI: A next-generation approach to multilevel prevention. *Exceptional Children, 78*(3), 263-279. PMCID: *PMC3380278*

Fuchs, D., Fuchs, L. S., Thompson, A., Al Otaiba, S., Yen, L., Braun, M., & O'Connor, R. E. (2001). Is reading important in reading-readiness programs? A randomized field trial with teachers as program implementers. *Journal of Educational Psychology, 93*, 251- 267. Retrieved from ERIC database. (EJ638740)

Fuchs, D., Fuchs, L. S., & Vaughn, S. (2014). What is intensive instruction and why is it important? *Teaching Exceptional Children, 46*(4), 13-18. Retrieved from https://doi.org/10.1177/0040059914522966

Frey, N., & Fisher, D. (2011). Feedback and feed forward. *Principal Leadership, 11*(9), 90-93. Retrieved from https://s3-us-west-1.amazonaws.com/fisher-andfrey/documents/ feed-nassp.pdf

Gallimore, R., Ermeling, B. A., Saunders, W. M., & Goldenberg, C. (2009). Moving the learning of teaching closer to practice: Teacher education implications of school-based inquiry teams. *Elementary School Journal, 109*(5), 537–553. Retrieved from https://people.stanford.edu/claudeg/sites/default/files/ESJ2009Gallimoreetal proofs.pdf

Garwood, J. D., Ciullo, S. B., & Brunsting, N. (2017). Supporting students with emotional and behavioral disorders' comprehension and reading fluency. *Teaching Exceptional Children, 46*(6), 391-401. Retrieved from 10.1177/00 4005991 7707434

Gergersen, T., & MacIntyre, P. D. (2014). Capitalizing on language learners; individuality: From premise to practice. Bristol, UK: Multilingual Matters.

Gersten, R., Jayanthi, M., & Dimino, J. (2017). Too much, too soon? Unanswered questions from national Response to Intervention evaluation. *Exceptional Children, 83*(3), 244-254. doi: 10.1177/0014402917692847

Gewertz, C. (2014). More educators say 'right amount' of time spent on testing. *Education Week, 33*(31), 8. Retrieved from https://www.edweek.org/ew/articles/ 2014/05/14/31survey.h33.html

Gilbert, J. K., Compton, D. L., Fuchs, D., Fuchs, L. S., Bouton, B., Barquero, L.A., & Cho, E. (2013). Efficacy of a first-grade responsiveness-to-intervention prevention model for struggling readers. *Reading Research Quarterly, 48*(2), 135–154. doi:10.1002/rrq.45

Good, R. H., & Kaminski, R. A. (Eds.). (2007). *Dynamic indicators of basic early literacy skills* (6th ed.). Eugene, OR: Institute for the Development of Educational Achievement. Retrieved from http://dibels.uoregon.edu

Grapin, S. L., & Kranzler, J. H. (2018). *School psychology: professional issues and practices*. New York, NY: Springer Publishing Company.

Great Schools Partnership. (2014). In *The Glossary of Education Reform.* Retrieved from https://www.edglossary.org/computer-adative-test

Gregory, A. E., & Cahill, M. A. (2010). Kindergartners can do it, too! Comprehension strategies for early readers. *Academic Journal of Reading Teacher, 63*(6), 515–520. doi:10.1598/RT.63.6.9

Gresham, F. M. (2007). Response to Intervention and emotional and behavioral disorders: Best practices in assessment for intervention. *Assessment for Effective Intervention, 32*(4), 214-222. Retrieved from https://doi.org/10.1177/15345084070320040301

Greulich, L., Al Otaiba, S., Schatschneider, C., Wanzek, J., Ortiz, M., & Wagner, R.K. (2014). Understanding inadequate response to first-grade multi-tier intervention: Nomothetic and ideographic perspectives. *Learning Disability Quarterly, 37*(4), 204-217.

Guthrie, J., Wigfield, A., Barbosa, P., Perencevich, K., Taboada, A., & Tonks, S. (2004). Increasing reading comprehension and engagement through concept-oriented reading instruction. *Journal of Educational Psychology, 96*(3), 403-423. doi:10.1037/0022-0663.96.3.403

Gustafson, S., Svensson, I., & Fälth, L. (2014). Response to Intervention and dynamic assessment: Implementing systematic, dynamic, and individualized interventions in primary school. *International Journal of Disability, Development, and Education, 61*(1), 27-43. Retrieved from https://doi.org/10.1080/1034912X.2014.878538

Hall, C., & Barnes, M.A. (2017). Inference instruction to support reading comprehension for elementary students with learning disabilities. *Intervention in School and Clinic. 52*(5), 279 – 286. doi:10.1177/1053451216676799

Hall, C., & Mahoney, J. (2013). Response to Intervention: Research and practice. *Contemporary Issues in Education Research, 6*(3), 273-278. Retrieved from ERIC database. (EJ1073194)

Halbesleben, J., & Whitman, M. (2013). Evaluating survey quality in health services research: A decision framework for assessing nonresponse bias. *Health Services Research, 48*(3), 913-930. doi:10.1111/1475-6773.12002

Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., . . . Zeichner, K. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 358–389). San Francisco, CA: Jossey-Bass.

Hannigan, J. D., & Hannigan, J. E. (2017). *Don't suspend me!: An alternative discipline toolkit*. Thousand Oaks, CA: Corwin, SAGE Publishing Company.

Harlacher, J. E. (2015). Distinguishing between tier 2 and tier 3 instruction in order to support implementation of RTI. Retrieved from http://www.rtinetwork.org/

essential/tieredinstruction/tier3/distinguishing-between-tier-2-and-tier-3-instruction-in-order-to-supportimplementation-of-rti

Harn, B., Rarisi, D., & Stoolmiller, M. (2013). Balancing fidelity with flexibility and fit: What do we really know about fidelity of implementation in schools? *Exceptional Children, 79*, 181–193. Retrieved from https://doi.org/10.1177/001440291307900204

Harrison, L., Peterman, R., Grehan, A., Ross, S., Dexter, E., & Inan, F. (2008, March). *Evaluation of the Leveled Literacy Intervention: Year 1*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY. Retrieved from http://www.memphis.edu/crep/pdfs/aera_08_lli.pdf

Hatalsky, L. E., & Johnson, S. (2015). Did No Child Left Behind work*?* Retrieved from https://www.thirdway.org/memo/did-no-child-left-behind-work

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement.* New York, NY: Routledge.

Hauerwas, L. B., Brown, R., & Scott, A. N. (2013). Specific learning disability and Response to Intervention: State-level guidance. *Exceptional Children*, *80*(1), 101-120. Retrieved from https://doi.org/10.1177/001440291308000105

Heck, R. H., & Chang, J. (2017). Examining the timing of educational changes among elementary schools after the implementation of NCLB. *Educational Administration Quarterly, 53*(4) 649-694. doi:10.1177/0013161X17711480

Heller, K. A., Holtzman, W. H., & Messick, S. (Eds.). (1982). *Placing children in special education: A strategy for equity*. Washington, DC: National Academy Press.

Herbert, M. (2011). States on track to have top-notched data systems. *District Administration, 47*(4), 12. Retrieved from http://www.districtadministration.com/article/states-track-have-top-notch-data-systems

Hernandez, D. (2012). *Double Jeopardy: How third grade reading skills and poverty influence high school graduation.* Albany, NY: The Annie E. Casey Foundation. Retrieved from http://www.aecf.org/m/resourcedoc/AECF-DoubleJeopardy - 2012-Full.pdf

Honig, M. I., & Venkateswaran, N. (2012). School–central office relationships in evidence use: Understanding evidence use as a systems problem. *American Journal of Education, 118*(2), 199-222. doi:10.1086/663282

Hooks, P., & Jones, S. (2002). The importance of automaticity and fluency for efficient reading comprehension. *Perspectives, 28*(1), 9–14. Retrieved from https://eps. schoolspecialty.com /EPS/media/Site- Resources/Downloads/articles/Importance_ Automaticity_Fluency.pdf

Hoover, J. J., & Love, E. (2011). Supporting school-based Response to Intervention: A practitioner's model. *Teaching Exceptional Children, 43*(3), 40-48. Retrieved from https:// doi.org/10.1177/004005991104300305

Hughes, C., & Dexter, D. D. (n.d.) The use of RTI to identify students with learning disabilities: A review of the research. Retrieved from http://www.rtinetwork. org/learn/ research/use-rti-identify-students-learning-disabilities-review-research

Hulpia, H., Devos, G., & Van Keer, H. (2010). The influence of distributed leadership on teachers' organizational commitment: a multilevel approach. *The Journal of Educational Research, 103*(1), 40-52. doi:10.1080/00220670903231201

Husband, T., & Hunt, C. (2015). A review of the empirical literature on No Child Left Behind from 2001 to 2010. *Planning and Changing, 46*(1/2), 212-254. Retrieved from ERIC database. (EJ1146269)

Jacob, B. (2016, September 29). *The wisdom of mandatory grade retention.* Washington, D.C.: The Brookings Institution. Retrieved from https://www.brookings.edu/ research/the-wisdomof-mandatory-grade-retention/

Jacob, B. A. (2005). Accountability, incentives and behavior: The impact of high-stakes testing in the Chicago Public Schools. *Journal of Public Economics, 89*(5-6), 761-796. doi:10.3386/w8968

January, S-A. A., & Ardoin, S. P. (2015). Technical adequacy and acceptability of curriculum-based measurement and the measures of academic progress. *Assessment for Effective Intervention, 41*(1), 3–15. doi:10.1177/153450841 5579095

January, S-A. A., Ardoin, S. P., Christ, T. J., Eckert, T. L., & White, M. J. (2016). Evaluating the interpretations and use of curriculum-based measurement in reading and word lists for universal screening in first and second grade. *School Psychology Review, 45*(3), 310-326. Retrieved from https://files.eric.ed.ov/full text/ EJ1141163. pdf

Jenkins, J. R., & Johnson, E. (n.d.). Universal screening for reading problems: Why and how should we do this? Retrieved from http://www.rtinetwork.org/essential/ assessment/ screening/readingproblems

Jenkins, J. R., Schiller, E., Blackorby, J., Thayer, S., & Tilly, W. (2013). Responsiveness to intervention in reading: Architecture and practices. *Learning Disability Quarterly, 36*(1), 36-46. doi:10.1177/0731948712464963

Jensen, D., & Tuten, J. (2012). *Successful reading assessments and interventions for struggling readers*. New York, NY: Palgrave MacMillan.

Jimerson, J. B., & McGhee, M. W. (2013). Leading inquiry in schools: Examining mental models of data-informed practice. *Current Issues in Education, 16*(1), 1 - 18. Retrieved from http://cie.asu.edu/ojs/index.php/cieatasu/article/viewFile/1163/454

Jimerson, J. B., & Wayman, J. C. (2012, April). *Branding educational data use through professional learning: Findings from a study in three school districts.* Paper presented at the annual meeting of the American Educational Research Association, Vancouver, BC. Retrieved from http://edadmin.edb.utexas.edu /datause/papers/Jimerson%20&%20 WaymanBranding%20Educational%20Data %20Use%20(2012%20AERA).pdf

Johnsen, S. K., Parker, S. L., & Farah, Y. N. (2015). Providing services for students with gifts and talents within a response-to-intervention framework. *Council for Exceptional Children, 47*(4), 226-233. doi:10.1177/0040059915569358

Johnson, K., & Street, E. M. (2013). *Response to Intervention and Precision Teaching: Creating synergy in the classroom*. New York, NY: Guilford Press.

Johnson, T. P., & Wislar, J. S. (2012). Response rates and nonresponse errors in surveys. *Journal of the American Medical Association, 307*(17), 1805-1806. doi:10.1001/ jama.2012.3532

Johnston, R. S., & Watson, J. (2004). Accelerating the development of reading, spelling and phonemic awareness. *Reading and Writing, 17*(4), 327–357. Retrieved from https://doi.org/10. 1023/ B:READ.0000032666.66359.62

Kamil, M. L., Borman, G. D., Dole, J., Kral, C. C., Salinger, T., & Torgesen, J. (2008). *Improving adolescent literacy: Effective classroom and intervention practices: A practice guide* (NCEE #2008-4027). Washington, DC: U.S. Department of Education, Center for Education Evaluation and Regional Assistance, Institute of Education Sciences.

Kaminski, R. A., Powell-Smith, K. A., Hommel, A., McMahon, R., & Aguayo, K. B. (2015). Development of a Tier 3 curriculum to teach early literacy skills. *Journal of Early Intervention, 36*(4), 313-332. doi:10.1177/1053815115581210

Kane, S. T., Roy, S., & Medina, S. (2013). Identifying college students at-risk for learning disabilities: Evidence for use of the Learning Difficulties Assessment in post-secondary settings. *Journal of Postsecondary Education and Disability, 26*(1), 21–33. Retrieved from https://files.eric.ed.gov/fulltext/EJ1026805.pdf

Kasprzak, C., Hurth, J., Rooney, R., Goode, S., Danaher, J. Whaley, K., . . . Cate, D. (2012). States' accountability and progress in serving young children with disabilities. *Topics in Early Childhood Special Education, 32*(3), 151-163. Retrieved from https://doi.org/10.1177/0271121411408119

Kennedy, A., Deuel, A., Nelson, T. H., & Slavit, D. (2011). Requiring collaboration or distributing leadership? *Phi Delta Kappan, 92*(8), 20-24. Retrieved from https:// doi.org/ 10.1177/003172171109200805

Kenner, B. B., Terry, N. P., Friehling, A. H., & Namy, L. L. (2017). Phonemic awareness development in 2.5- and 3.5-year-old children; An examination of emergent, receptive, knowledge and skills. *Reading and Writing, 30*(7), 1575-1594. Retrieved from https://doi.org/10.1007/s1114

Khamesipour, M. (2015, August). The effects of explicit and implicit instruction of vocabulary through reading on EFL learners' vocabulary development. *Theory and Practice in Language Studies, 5*(8), 1620-1627. Retrieved from http://dx. doi.org/10. 17507/ tpls.0508.11

Kieffer, M. M., & Vukovic, R. (2013). Growth in reading-related skills of language minority learners and their classmates: More evidence for early identification and intervention. *Reading & Writing, 26*(7), 1159-1194. doi:10.1007/s11145-012-9410-7

Kilgus, S. P., Methe, S. A., Maggin, D. M., & Tomasula, J. L. (2014). Curriculum-based measurement of oral reading (R-CBM): A diagnostic test accuracy meta-analysis of evidence supporting use in universal screening. *Journal of School Psychology, 52*(4), 377-405. doi: 10.1016/j.jsp.2014.06.002

Kim, Y. S., Petscher, Y., Schatschneider, C., & Foorman, B. (2010). Does growth rate in oral reading fluency matter in predicting reading comprehension achievement? *Journal of Educational Psychology, 102*(3), 652-667. doi:10.1037/a0019643

Klauda, S. L., & Guthrie, J. T. (2008). Relationships of three components of reading fluency to reading comprehension. *Journal of Educational Psychology, 100*(2), 310-321. doi:10.1037/0022-0663.100.2.310

Knight-McKenna, M. (2008). Syllable types: A strategy for reading multisyllabic words. *Teaching Exceptional Children, 40(3),* 18-24. Retrieved from ERIC database. (EJ849807)

Konstantopoulos, S., Li, W., Miller, S. R., & van der Ploeg, A. (2016). Effects of interim assessments across the achievement distribution: Evidence from an experiment. *Educational and Psychological Measurement, 76*(4) 587-608. doi:10.1177/00131 644 15606498

Kovaleski, J. F., VanDerHeyden, A. M., & Shapiro, E. S. (2013). *Guilford practical intervention in the schools: RTI approach to evaluating learning disabilities*. New York, NY: The Guilford Press.

Kruse, S. D., & Zimmerman, B. (2012). Can literacy coaching provide a model for schoolwide professional learning? *Educational Research Journal*, *2*(9), 279-291. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.476. 9910 &rep=rep1&type=pdf

Kuhn, K. E., Rausch, C. M., McCarty, T. G., Montgomery, S. E., & Rule, A. C. (2017). Utilizing nonfiction texts to enhance reading comprehension and vocabulary in primary grades. *Early Childhood Education Journal, 45*, 285-296. doi:10.1007/s 10643-015-0763-9

Lampert, M., & Graziani, F. (2009). Instructional activities as a tool for teachers' and teacher educators' learning. *Elementary School Journal, 109*(5), 491–509. Retrieved from http://sitemaker.umich.edu/ltp/files/ml__graziani-esj__ias_in_ dilit.pdf

Lazarin, M. (2014). *Testing overload in America's schools.* Retrieved from Center for American Progress website: https://files.eric.ed.gov/fulltext/ED561097.pdf

Learning Point Associates. (2004). *A closer look at the five essential components of effective reading instruction: A review of scientifically based reading research for teachers*. Naperville, IL: Learning Point Associates. Retrieved from https://files. eric.ed. gov/fulltext/ ED512569.pdf

Lee, Y. S., & Jonson-Reid, M. (2016). The role of self-efficacy in reading achievement of young children in urban schools. *Child Adolescent Social Work Journal, 33*(1), 79-89. doi:10.1007/s 10560-015-0404-6

Lemov, D. (2010). *Teach like a champion: 49 techniques that put students on the path to college*. San Francisco, CA: Jossey-Bass.

Lesnick, J., Goerge, R. M., Smithgall, C., & Gwynne, J. (2010). *Reading on grade level in third grade: How is it related to high school performance and college enrollment?* Chicago: University of Chicago, Chapin Hall

Lewis, D., Madison-Harris, R., Muoneke, A., & Times, C. (2010). Using data to guide instruction and improve student learning. *SEDL Letter, 22*(2), 10-12. Retrieved from http://www.sedl.org/pubs/sedl-letter/v22n02/using-data.html

Li, H., & Xiong, Y. (2018). The relationship between test preparation and state test performance: Evidence from the Measure of Effective Teaching (MET) project. *Education Policy Analysis Archives, 26*(64), 1-21. Retrieved from http://dx.doi. org/10. 14507/epaa.26. 3530

Li, L., & Wu, X. (2015). Effects of metalinguistic awareness on reading comprehension and the mediator role of reading fluency from grades 2 to 4. *PLoS One, 10*(3), 1–16. doi:10.1371/journal.pone.0114417

Loftus, S. M., & Coyne, M. D. (2013). Vocabulary instruction within a multi-tier approach. *Reading & Writing: Overcoming Learning Difficulties, 29*(1), 4-19. Retrieved from https://doi.org/10.1080/10573569.2013.741942

Louis, K. S., Leithwood, K., Wahlstrom, K. L., & Anderson, S. E. (2010, July). *Learning from leadership: Investigating the links to improved student learning.* [Final Report of Research Findings]. Retrieved from http://www.wallacefoundation.org/knowledge-center/school- leadership/key-research/Documents/Investigating-the-Links-to-Improved-Student-Learning.pdf

Mahdavi, J. N., & Tensfeldt, L. (2013). Untangling reading comprehension strategy instruction: Assisting struggling readers in the primary grades. *Preventing School Failure, 57*(2), 77–92. doi:10.1080/1045988X.2012.668576

Maki, K. E., Floyd, R. G., & Roberson, T. (2015). State learning disability eligibility criteria: A comprehensive review. *School Psychology Quarterly, 30*(4), 457-469. doi:10.1037/spq0000109

Malin, J. R., Bragg, D. D., & Hackmann, D. G. (2017). College and career readiness and the Every Student Succeeds Act. *Educational Administration Quarterly, 53*(5), 809-838. doi:10.1177/0013161X17714845

Mandinach, E. B. (2012). A perfect time for data use: Using data-driven decision making to inform practice. *Educational Psychologist, 47*(2), 71-85. doi:10.1080/00461520.2012.667064

Mandinach, E. B., & Gummer, E. S. (2013). Defining data literacy: A report on a convening of experts. *Journal of Educational Research and Policy Studies, 13*(2), 6-28. Retrieved from http://bit.ly/1UxbZBM

Mandinach, E. B. & Jackson, S. (2010). *District level use of data*. Presentation at the NCES STATS-DC 2010 Data Conference, Bethesda, MD. Retrieved from https://nces.ed.gov/ whatsnew/conferences/Statsdc/2010/STATS2010Agenda.pdf

Marchand, J., & Pitluck, C. (2015). *Massachusetts study on assessment practices in districts.* Retrieved from http://www.doe.mass.edu/research/reports/2015/08 AssessmentPractices.pdf

Marsh, J. A., McCombs, J. S., & Martorell, F. (2010). How instructional coaches support data-driven decision making: Policy implementation and effects in Florida middle schools. *Educational Policy, 24*(6), 872-907. doi:10.1177/0895904809341467

Martin, J. L. (2015). Legal implications of Response to Intervention and special education identification. Retrieved from http://www.rtinetwork.org/learn/ld/legal-implications-ofresponse-to-intervention-and-special-education-identification

McDaniel, S., Albritton, K., & Roach, A. (2013). Highlighting the need for further Response to Intervention research in general education. *Research in Higher Education Journal, 20*(1), 1-12. Retrieved from https://files.eric.ed.gov/fulltext/ EJ1064666.pdf

McDaniel, S. M., Bruhn, A. L., & Mitchell, B. (2015). Tier 2: A framework for identification and intervention. *Beyond Behavior, 24*(1), 10–17. Retrieved from https://doi.org/10. 1177/107429561502400103

McInerney, M., & Elledge, A. (2013). Using a Response to Intervention framework to improve student learning: A pocket guide for state and district leaders. Implementing ESEA Flexibility Plans. Retrieved from https://files.eric.ed.gov/fulltext/ED565680.pdf

McKenna, J. W., Flower, A., & Ciullo, S. (2014). Measuring fidelity to improve intervention effectiveness. *Intervention in School and Clinic, 50*(1), 15-21. Retrieved from https://doi.org/10.1177/1053451214532348

McMillan, J. H. (2005). *The impact of high-stakes test results on teachers' instructional and classroom assessment practices*. University, Richmond, VA: Metropolitan Educational Research Consortium, Virginia Commonwealth. ERIC Document Reproduction Service No. ED490648.

Means, B., Padilla, C., & Gallagher, L. (2010). *Use of education data at the local level: From accountability to instructional improvement.* Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development. Retrieved from http://www2.ed.gov/rschstat/ eval/tech/use-of-education-data/index.html?exp=0

Means, B., Padilla, C., & Gallagher, L. (2011). *Teachers' ability to use data to inform instruction: Challenges and supports.* Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development. Retrieved from http://www2.ed.gov/rschstat/eval/data-to-inform-instruction/ report.doc

Melby-Lervâg, M., Lyster, S. H., & Hulme, C. (2012). Phonological skills and their role in learning to read: A meta-analytic review. *Psychological Bulletin, 138(2),* 322-352. doi:10.1037/a0026744

Missouri Department of Elementary and Secondary Education. (2016a). [website]. Retrieved from https://dese.mo.gov/ communications/news-releases/statewide-2016-map-results-released

Missouri Department of Elementary and Secondary Education. (2016b). *District report card.* Retrieved from http://mcds.dese.mo.gov/guidedinquiry/School%20Report%20Card/School%20Report%20Card.aspx?rp:SchoolYear=2017&rp:SchoolYear=2016&rp:SchoolYear=2015&rp:SchoolYear=2014&rp

Missouri Department of Elementary and Secondary Education. (2016c). *District demographic data.* Retrieved from http://mcds.dese.mo.gov/guidedinquiry/District%20and%20Building%20Student%20Indicators/District%20Demographic%20Data.aspx?rp:SchoolYear=2017&rp:SchoolYear=2016&rp:SchoolYear=2015&rp:SchoolYear=2014

Moe, T. M. (2014). An education in politics: The origin and evolution of No Child Left Behind. *Political Science Quarterly, 129*(2), 333-336. Retrieved from https://doi. org /10.1177/0094306114522415ll

Montalvo, R., Combes, B. H., & Kea, C. D. (2014). Perspectives on culturally and linguistically responsive RtI pedagogics through a cultural and linguistic lens. *Interdisciplinary Journal of Teaching and Learning, 4*(3), 203-219. Retrieved from https://files.eric.ed.gov/fulltext/ EJ1065903.pdf

Mulholland, Q. (2015, May 14). The case against standardized testing. *Harvard Political Review.* Retrieved from http://harvardpolitics.com/united-states/case-standardized-testing/

Mundschenk, N. A., & Fuchs, W. W. (2016). Professional learning communities: An effective mechanism for the successful implementation and sustainability of Response to Intervention. *SRATE Journal, 25*(2), 55-63. Retrieved from https://files.eric.ed.gov/fulltext/EJ1113856.pdf

Murray, J. (2014). Critical issues facing school leaders concerning data-informed decision-making. *The Professional Educator, 38*(1), 14-22. Retrieved from http://files. eric.ed.gov/ fulltext/EJ1038162.pdf

Muter, V., Hulme, C., Snowling, M. J., & Stevenson, J. (2004). Phonemes, rimes, vocabulary, and grammatical skills as foundations of early reading development: Evidence from a longitudinal study. *Developmental Psychology, 40*(5), 665-681. doi:10.1037/0012-1649.40.5.665

Nagy, W. & Scott, J. (2000). Vocabulary processes. In M. Kamil, P. Mosenthal, P. Pearson, & R. Barr (Eds.), *Handbook of reading research* (vol. 3, pp. 269–284). Mahwah, NJ: Erlbaum.

National Assessment of Educational Progress in Reading. (2016). National aAchievement Level Results. Retrieved from https://www.nationsreportcard.gov/reading_math_2015/#reading/acl?grade=4

National Center for Education Statistics. (2013). The Nation's Report Card: Trends in Academic Progress 2012 (NCES 2013 456). Retrieved from https://nces.ed.gov/nationsreportcard/subject/publications/main2012/pdf/2013456.pdf

National Conference of State Legislatures. (2012). *Student achievement.* [Brief]. Washington, DC: Cunningham, J. Retrieved from www.ncsl.org

National Early Literacy Panel. (2008). *Developing Early Literacy: Report of the National Early Literacy Panel.* Washington, DC: National Institute for Literacy. Retrieved from http://lincs.Ed.gov/publications/pdf/NELPReport09.pdf

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *About the standards*. Washington, DC: Authors. Retrieved from http://www.corestandards.org/about-the-standards/

National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups* (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office.

National Research Council. (1998). *Preventing reading difficulties in young children*. Washington, DC: The National Academies Press.

National Research Council. (2011). Incentives and test-based accountability in education. Committee on incentives and test-based accountability in public education. In M. Hout & S. W. Elliott (Eds.), *Board on Testing and Assessment,* Division of Behavioral and Social Sciences and Education, Washington, D.C.: The National Academies Press.

National Reading Panel. (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Washington, DC: U.S. Department of Health and Human Services.

Neddenriep, C. E., Fritz, A. M., & Carrier, M. E. (2011). Assessing for generalized improvements in reading comprehension by intervening to improve reading fluency. *Psychology in the Schools, 48*(1), 14–27. doi:10.1002/pits.20542

Nelson, H. (2013). *Testing more, teaching less: What America's obsession with student testing costs in money and lost instructional time*. Retrieved from https://www.aft.org/sites/default/files/news/testingmore 2013.pdf

Ngwudike, B. C. (2010). Progress in International Reading Literacy Study (PIRLS) 2001 and 2006: Reading literacy achievement of America's fourth-grade students in a national and international context. *NAAAS & Affiliates Conference Monographs,* 658-673. Retrieved from http://connection.ebscohost.com/c/articles/61059931/ progress- international-reading-literacy-study-pirls-2001-2006-reading-literacy-achievement-americas-fourth-grade-students-national-international-context

Nichols, S. L., Glass, G. V., & Berliner, D. C., (2012). High-stakes testing and student achievement: Updated analyses with NAEP data. *Education Policy Analysis Archives, 20*(20), 1 - 35. Retrieved from http://dx.doi.org/10.14507/ epaa.v 20n.2012

No Child Left Behind Act of 2001. (2002). 20 U.S.C. §6301, Pub. L. No. 107-110 1-670. Retrieved from https://www.congress.gov/107/plaws/publ110/PLAW-107publ110.pdf

Nussbaum-Beach, S., & Rutter Hall, L. (2012). *The connected educator: Learning and leading in a digital age*. Bloomington, IN: Solution Tree Press.

O'Day, J. A., & Smith, M. S. (2016). *Systemic problems, systemic solutions: Equality and quality in U.S. education.* Washington, DC: American Institutes for Research.

Retrieved from http://www.air.org/sites/default/ files/downloads/report/Equality-Quality-Education-EPC-September-2016.pdf

Oakhill, J. V., & Cain, K. (2011). The precursors of reading ability in young readers: evidence from a four-year longitudinal study. *Journal of Research in Reading, 16*(2), 91–121. doi:10.1080/10888438.2010.529219.

Organisation for Economic Co-operation and Development. (2015). *PISA 2015 results in focus*. Retrieved from https://www.oecd.org/pisa/ pisa-2015-results-in-focus.pdf

Paige, D. D., Rasinski, T. V., & Magpuri- Lavell, T. (2012). Is fluent, expressive reading important for high school readers? *Journal of Adolescent and Adult Literacy, 56*(1), 67–76. doi:10.1002/JAAL.00103

Partanen, M., & Siegel, L. (2014). Long-term outcome of the early identification and intervention of reading disabilities. *Reading & Writing, 27*(4), 665-684. Retrieved from https://doi.org/10.1007/s11145-013-9472-1

Pearson Education. (2012). *AIMSweb test of early literacy administration and scoring guide.* Bloomington, MN: Pearson Education. Retrieved from https://cdn2.hub spot.net/hubfs/559254 /aimswebPlus-Refresh-2018/Docs/TEL_UG.pdf

Peterman, R., Grehan, A., Ross, S., Gallagher, B., & Dexter, E. (2009, April). *An evaluation of the Leveled Literacy Intervention program: A small-group intervention for students in K-2.* Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA. Retrieved from http://www.memphis.edu/ crep/pdfs/aera_08_lli.pdf

Phelps, R. P. (2006). Characteristics of an effective student testing system. *Educational Horizons*, *85*(1), 19-29. Retrieved from ERIC database. (EJ750639)

Pikulski, J. J., & Chard, D. J. (2005). Fluency: Bridge between decoding and reading comprehension. *The Reading Teacher, 58*(6), 510–519. Retrieved from http://literacy how. com/wp-content/uploads/2013/08/Pikulski-Fluency.pdf

Polesel, J., Dulfer, N., & Turnbull, M. (2012*). The experience of education: The impacts of high stakes testing on school students and their families*. Retrieved from https:// www.westernsydney. edu.au/data/assets/ pdf_file/ 0008/276191/High_Stakes_ Testing_Literature_Review.pdf

Price, K., & Nelson, K. (2013). *Planning effective instruction: Diversity responsive methods and management.* Belmont, CA: Cengage Learning.

Price-Mohr, R., & Price, C. (2017). Gender differences in early reading strategies: A comparison of synthetic phonics only with a mixed approach to teaching reading to 4-5-year-old children. *Early Childhood Education Journal, 45*(5), 613-620. Retrieved from https://doi.org/10.1007/s10643-016-0813-y

Priebe, S. J., Keenan, J. M., & Miller, A. C. (2012). How prior knowledge affects word identification and comprehension. *Reading and Writing, 25*(1), 131-149. doi:10. 1007/s11145-010-9260-0

Pruitt, P. L., & Bowers, A. J. (2014, March). *At what point do schools fail to meet adequate yearly progress and what factors are most closely associated with their failure? A survival analysis*. A paper presented at the annual meeting of the Association of Education Finance and Policy, San Antonio, TX. Retrieved from https://academic commons.columbia.edu/catalog/ac:189780

Ransford-Kaldon, C., Flynt, E. S., & Ross, C. (2011). *A randomized controlled trial of a response-to-intervention (RTI) tier 2 literacy program: leveled literacy*

intervention (LLI). Evanston, IL: Society for Research on Educational Effectiveness. Retrieved from ERIC database. (ED518772)

Ransford-Kaldon, C. R., Flynt, E. S., Ross, C.L., Franceschini, L., Zoblotsky, T., Huang, Y., . . . Gallagher, B. (2010). *An empirical study to evaluate the efficacy of Fountas and Pinnell's leveled literacy intervention system (LLI), 2009-2010.* Memphis, TN: Center for Research in Educational Policy. Retrieved from ERIC database. (ED544374)

Ransford-Kaldon, C. R., Ross, C. L., Lee, C. C. Flynt, E. S., Franceschini, L. A., & Zoblotsky, T. A. (2013). *Efficacy of the leveled literacy intervention system for K-2 urban students: An empirical evaluation of LLI in Denver Public Schools.* Memphis, TN: Center for Research in Educational Policy. Retrieved from https:// ies.ed.gov/ncee/ wwc/Study/85470

Rasinski, T. (1990). Investigating measures of reading fluency. *Educational Research Quarterly, 14*(3), 34–44. Retrieved from ERIC database. (EJ429475)

Rasinski, T., Rikli, A., & Johnston, S. (2009). Reading fluency: More than automaticity? More than a concern for the primary grades. *Literacy Research and Instruction, 48*(4), 350-361. Retrieved from https://doi.org/10.1080/19388070802468715

Rasinski, T. V., Blachowicz, C. L., & Lems, K. (Eds.). (2012). *Fluency instruction: Research-based best practices* (2nd ed.). New York, NY: Guilford Press.

Ravitch, D., & Chubb, J. (2009). The future of No Child Left Behind. *Education Next, 9*(3), 48-56. Retrieved from http://educationnext.org/the-future-of-no-child-left-behind/

Rayner, K., Foorman, B., Perfetti, C., Pesetsky, D., & Seidenberg, M. (2001). How psychological science informs the teaching of reading. *Psychological Science in the Public Interest, 2*(2), 31–74. Retrieved from https://doi.org/10.1111/1529-1006.00004

Regan, K. S., Berkeley, S. L., Hughes, M., & Brady, K. K. (2015). Understanding practitioner perceptions of responsiveness to intervention. *Learning Disability Quarterly, 38*(4), 234-247. Retrieved from https://doi.org/10.1177/0731948715580437

Renaissance Learning. (2013). *The Research Foundation for Star Assessments: The science of Star.* Retrieved from http://doc.renlearn.com/kmnet/r001480701gcfbb9.pdf

Renaissance Learning. (2015). *The Research Foundation for Star Assessments: The science of Star.* Retrieved from http://doc.renlearn.com/KMNet/R0057127714A9493.pdfhttp://doc.renlearn.com/kmnet/r004384910gjf6ac.pdf

Renaissance Learning. (2016). *The next generation of Response to Intervention: Using data-fueled insight, decisions, and resources to respond to challenge, intervention, and growth*. Retrieved from http://doc.renlearn.com/KMNet/R60382.pdf

Reschly, D. J. (2014). Response to Intervention and the identification of specific learning disabilities. *Topics in Language Disorders, 34*(1), 39-58. Retrieved from https://doi.org/10.1002/ pits.20195

Reutzel, D., & Cooter, R. (2013). *The essentials of teaching children to read: The teacher makes the difference.* Upper Saddle River, NJ: Pearson.

Riccards, P. (2012). *Read all about it! What states are doing to ensure kids are reading by third grade.* Policy Innovators in Education Network. Retrieved from https:// eric.ed. gov/?id=ED540344

Richardson, J. (2011). The ultimate practitioner. *Phi Delta Kappan, 93*(1), 27-32. doi:10.1177/003172171109300104

Ritchie, S. J., Bates, T. C., & Plomin, R. (2015). Does learning to read improve intelligence? A longitudinal multivariate analysis in identical twins from age 7 to 16. *Child Development, 86*(1), 23–36. doi:10.1111/cdev.12272

Robinson, G. G., Bursuck, W. D., & Sinclair, K. D. (2013). Implementing RTI in two rural elementary schools: Encouraging beginnings and challenges for the future. *Rural Educator, 34*(3), 1-9. Retrieved from ERIC database. (EJ1014132)

RTI Action Network. (2015). What is RTI? Retrieved from http://www.rtinetwork.org/ learn/what

Rubin, D. (2011). The disheartened teacher: Living in the age of standardization, high-stakes assessments, and No Child Left Behind (NCLB). *Changing English, 18*(4), 407-416. doi:10.1080/1358684X.2011.630197

Rush, L. S., & Scherff, L. (2012). NCLB 10 years later. *English Education, 44*(2), 91-101. Retrieved from http://www.ncte.org/library/NCTEFiles/Resources/Journals /EE /0442-jan2012/EE0442Opening2.pdf

Salinger, R. L. (2016). Selecting universal screening measures to identify students at risk academically. *Intervention in School and Clinic, 52*(2), 77-84. doi:10.1177/105 3451216636027

Scarborough, H. S., & Brady, S. A. (2002). Toward a common terminology for talking about speech and reading: A glossary of the "phon" words and some related terms. *Journal of Literacy Research, 34*(3), 299-336. Retrieved from https://doi.org/ 10.1207/ s15548430jlr3403_3

Shanahan, T. (2014). How and how not to prepare students for the new tests. *The Reading Teacher, 68(*3), 184-188. doi:10.1002/trtr.1315

Shanahan, T., & Lonigan, C. J. (Eds.). (2013). *Literacy in preschool and kindergarten children: The National Early Literacy Panel and beyond*. Baltimore, MD: Brookes Publishing.

Schanzenbach, D. W., Bauer, L., & Mumford, M. (2016). *Lessons for broadening school accountability under the Every Student Succeeds Act.* Washington, DC: Brookings, The Hamilton Project. Retrieved from http://www.hamiltonproject. org/ assets/files/lessons_ broadening_ school_ accountability_essa.pdf

Scholin, S., Haegele, K. M., & Burns, M. K. (2013). A small-group reading comprehension intervention for fourth- and fifth-grade students. *School Psychology Forum: Research into Practice, 7*(2), 40-49. doi:0.18666/LDMJ-2016-V22-I1-7991

Shapiro, E. S. (2012). *New thinking in Response to Intervention: A comparison of computer adaptive tests and curriculum-based measurement within RTI.* [Practice Brief]. Wisconsin Rapids, WI: Renaissance Learning, Inc. Retrieved from http:// doc.renlearn. com/KMNet/R00547943CE5AC66.pdf

Shapiro, E. S. (2015). Tiered instruction and intervention in a Response to Intervention model. Retrieved from http://www.RTInetwork.org/essential/tieredinstruction/tiered-instruction-and-intervention-RTI-model

Sharp, K., Sanders, K., Noltemeyer, A., Hoffman, J., & Boone, W. J. (2016). The relationship between RTI implementation and reading achievement: A school-level analysis. *Preventing School Failure, 60*(2), 152-160. Retrieved from http://dx.doi.org/10. 1080/1045988X.2015. 1063038

Shaw, S. M., & Wayman, J. C. (2012). *Third-year results from an efficacy study of the Acuity data system*. Austin; Authors. Retrieved from http://edadmin.edb.utexas.edu/ datause/papers/Shaw%20and%20Wayman%20Year%203%20Acuity%20report.pdf

Shen, J., Cooley, V., Ma, X., Reeves, P., Burt, W., Rainey, M., . . . Yuan, W. (2012). Data-informed decision-making on high-impact strategies: Developing and validating an instrument for principals. *The Journal of Experimental Education, 80(*1), 1-25. doi:10.1080/00220973.2010.550338

Shippen, M. E., Houchins, D. E., Crites, S. A., Derzis, N. C., & Patterson, D. (2010). An examination of the basic reading skills of incarcerated males. *Adult Learning, 21*(3), 4-12. Retrieved from https://doi.org/10.1177/104515951002100301

Sparks, R., Patton, J., & Murdoch, A. (2014). Early reading success and its relationship to reading achievement and reading volume: replication of ’10 years later.” *Reading and Writing, 27*(1), 189-211. doi:10.1007/s11145-013-9439-2

Stancel-Piatak, A., Mirazchiyski, P., & Desa, D. (2013). Promotion of reading and early literacy skills in schools: A comparison of three European countries. *European Journal of Education, 48*(4), 498-507. doi:10.1111/ejed.12050

Stanovich, K. E. (2000). *Progress in understanding reading: Scientific foundations and new frontiers.* Guilford, NY: The Guilford Press.

Steinberg, G. (2013). Amending § 1415 of the idea: Extending procedural safeguards to Response-to-Intervention students. *Columbia Journal of Law and Social Problems, 46*(3), 393-429. Retrieved from http://jlsp.law.columbia.edu/wp-content/uploads/sites/8/2017/ 03/ 46-Steinberg.pdf

Stormont, M., & Reinke, W. M. (2013). Implementing Tier 2 social behavioral interventions: Current issues, challenges, and promising approaches. *Journal of Applied School Psychology. 29*(2), 121-123. Retrieved from https://doi.org/10.1080/15377903.2013.778769

Strickland, D., & Riley-Ayers, S. (2006). *Early literacy: Policy and practice in the preschool years.* [Policy Brief]. Rutgers University: National Institute for Early Education Research (NIEER). Retrieved from http://nieer.org/wpcontent/uploads/2016/08/10.pdf

Terry, K. (2010). We just can't seem to do what NCLB expects us to do: The case of an urban district focused on NCLB compliance. *Journal of Cases in Educational Leadership, 13*(1), 8- 22. doi:10.1177/1555458910366026

Thessin, R. A. (2015). Learning from one urban school district: Planning to provide essential supports for teachers work in professional learning communities.

Educational Planning, 22(1) 15-27. Retrieved from http://isep.info/wp-content/uploads/2015/12/ Vol.22.No _.1_2LearningFromUrban.pdf

Thessin, R. A., & Starr, J. P. (2011). Supporting the growth of effective professional learning communities district wide. *Phi Delta Kappan, 92*(6), 48-54. Retrieved from https://doi. org/10.1177/003172171109200611

Thomas, R. S. (2010). Data processing. *Principal Leadership, 11*(3), 52-57. Retrieved from http://www.principals.org/Content.aspx?topic=Data_Processing

Tompkins, G. E. (2010). *Literacy for the 21st century*: *A balanced approach* (5th ed.). Boston, MA: Allyn & Bacon.

Topol, B., Olson, J., Roeber, E., & Hennon, P. (2012). *Getting to higher-quality assessments: Evaluating costs, benefits, and investment strategies*. Assessment Solutions Group.

Torgesen, J. K. (2002). The Prevention of reading disabilities. *Journal of School Psychology, 40*(1), 7-26. Retrieved from https://doi.org/10.1016/S0022-4405(01)00092-9

Turse, A. T., & Albrecht, S. F. (2015). The ABCs of RTI: An introduction to the building blocks of Response to Intervention. *Preventing School Failure, 59*(2), 83-89. Retrieved from ERIC database (EJ1049850)

Unger, J. (2013). Flex your school's data muscles: Leadership strategies strengthen data's impact. *Journal of Staff Development, 34*(4), 50-54. Retrieved from https://using data.terc.edu/articles/articlePDFs/unger344.pdf

U.S. Department of Education. (1983). *A nation at risk: The imperative for educational reform.* The Commission on Excellence in Education. Retrieved from

https://www.edreform.com/wp-content/uploads/2013/02/A_Nation_At_Risk_1983.pdf

U.S. Department of Education. (2002). *No child left behind: A desktop reference.* Washington, DC: Author, Office of Elementary and Secondary Education.

U.S. Department of Education (2010). *The blueprint for education reform: Reauthorization of the Elementary & Secondary School Act.* Washington, DC: Office of Planning, Evaluation, and Policy. Retrieved from https://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf

U.S. Department of Education. (2013). *Building the legacy: IDEA.* Retrieved from http://idea-b.ed.gov/explore/home.html

U.S. Department of Education. (2016). *Revenues and expenditures for public elementary and secondary education: School year 2013-14 (fiscal year 2014).* Retrieved from https://nces. ed.gov/pubs2016/2016301.pdf

U.S. Department of Education. (2017). *Leveled literacy intervention: What works: Clearinghouse intervention report.* Retrieved from https://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_leveledliteracy_091917.pdf

U.S. Department of Education. (2018). *Every Student Succeeds Act (ESSA).* Retrieved from http://www.ed.gov/essa?src=rn

Vagi, R. L., Collins, C., & Clark, T. (2017). Identifying scalable policy solutions: A state-wide cross-classified analysis of factors related to early childhood literacy. *Education Policy Analysis Archives, 25*(9), 1-24. Retrieved from http://dx.doi.org/10.14507/epaa. 25.2686

Van den Bossche, P., Wjselaers, W., Segers, M., Woltjer, G., & Kirschner, P., (2011). Team learning: building shared mental models. *Instructional Science, 39*(3), 283-301. doi:10.1007/s11251-010-9128-3

Van Keer, H., & Verhaeghe, J. (2005). Effects of explicit reading strategies instruction and peer tutoring on second and fifth graders' reading comprehension and self-efficacy perceptions. *Journal of Experimental Education, 73*(4), 291. doi:10.3200/JEXE.73.4.291-329

VanDerHeyden, A. M., Kovaleski, J. E., Shapiro, E. S., & Painter, D. T. (2014). Scientifically supported identification of SLD using RTI: A response to Colker. *Journal of Law & Education, 43*(2), 229-247. Retrieved from http://connection. ebscohost. com/c/articles/95508347/scientifically-supported-identification-sld-using-rti-response-colker

VanWinkle, W., Vezzu, M., & Zapata-Rivera, D. (2011). *Question-based reports for policymakers* (Research Memorandum No RM-11-16). Retrieved from http:// www.ets. org/Media/Research/pdf/RM-11-16.pdf

Vaughn, S., & Swanson, E. A. (2015). Special education research advances knowledge in education. *Exceptional Children, 82*(1), 11-24. Retrieved from https://doi.org/10. 1177/0014402 915598781

Vellutino, F. R., Tunmer, W. E., Jaccard, J. J., & Chen, R. (2007). Components of reading ability: Multivariate evidence for a convergent skill model of reading development. *Scientific Studies of Reading, 11,* 3–32. doi:10.1207/s1532799 xssr1101_2

Verhoeven, L., & van Leeuwe, J. (2008). Prediction of the development of reading comprehension: A longitudinal study. *Applied Cognitive Psychology, 22*(3), 407–423. doi:10.1002/acp.1414.

Vernon-Feagans, L., Kainz, K., Amendum, M.G., Wood, T., & Bock, A. (2012). Targeted reading intervention: A coaching model to help classroom teachers with struggling readers. *Learning Disability Quarterly, 35*(2), 102-114. doi: 10.1177/0731948711434048

Vesay, J. P., & Gischlar, K. L. (2013). The big five: Teacher knowledge and skill acquisition in early literacy. *Reading Horizons, 52*(3), 281-302. Retrieved from https://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=3088&context=reading_horizons

Wanzek, J., Roberts, G., & Al Otaiba. (2013). Academic responding during instruction and reading outcomes for kindergarten students at-risk for reading difficulties. *Reading and Writing: An Interdisciplinary Journal, 27*(1), 55-78. doi: 10.1007/s11145-013-9433-8

Wanzek, J., Roberts, G., Otaiba, S., & Kent, S. (2014). The relationship of print reading in tier 1 instruction and reading achievement for kindergarten students at risk of reading difficulties. *Learning Disability Quarterly, 37*(3), 148-160. doi:10.1177/073194871 3518334

Wanzek, J. J., Vaughn, S., Scammacca, N., Gatlin, B., Walker, M., & Capin, P. (2016). Meta-Analyses of the effects of tier 2 type reading intervention in grades K-3. *Educational Psychology Review, 28*(3), 551-576. doi:10.1007/s10648-015-9321-7

Wayman, J. C., & Cho, V. (2014). *Realistic Expectations in the data-informed district*. Paper presented at the 2014 annual meeting of the American Educational Research Association, Philadelphia, PA. Retrieved from http://www.waymandatause.com/wp-content/uploads/2014/04/Wayman-Cho-realistic-expectations.pdf

Wayman, J. C., Jimerson, J., & Cho, V. (2010). *District policies for the effective use of student data.* Paper presented at the 2010 convention of the University Council for Educational Administration, New Orleans, LA. Retrieved from http://edadmin.edb.utexas.edu/datause/papers/Wayman_JimersonCho_District_Policies_and_Data _Use.pdf

Wayman, J. C., Spring, S. D., Lemke, M. A., & Lehr, M. D. (2012, April). *Using data to inform practice: Effective principal leadership strategies.* Paper presented at the 2012 Annual Meeting of the American Educational Research Association, Vancouver, Canada. Retrieved from http://edadmin.edb.utexas.edu/datause/papers/Wayman%20 Spring%20Lemke%20Lehr%20Principal%20Data%20Use%20Strategies.pdf

Weiser, B. (2013). *Effective vocabulary instruction for kindergarten to 12th grade students experiencing learning disabilities*. Retrieved from http://www.council-for-learning-disabilities.org/wp-content/uploads/2013/11/Vocabulary-Word-2013.pdf

Whitaker, S. D., Harvey, M., Hassell, L. J., Linder, T., & Tutterrow, D. (2006). The fish strategy: Moving from sight words to decoding. *Teaching Exceptional Children, 38(5),* 14-18. Retrieved from https://doi.org/10.1177/004005990603800502

The White House. (2015). *Fact sheet: Congress acts to fix No Child Left Behind*. Office of the Press Secretary. Retrieved from https://www.whitehouse.gov/the-press-office/2015/12/03/

White, R. B., Polly, D., & Audette, R. H. (2012). A case analysis of an elementary school's implementation of Response to Intervention. *Journal of Research in Childhood Education, 26*(1), 73-90. Retrieved from https://doi.org/10.1080/02568543.2011.632067

Weddle, S. A., Spencer, T. T., Kajan, M., & Peterson, D. B. (2016). An examination of a multitiered system of language support for culturally and linguistically diverse preschoolers: Implications for early and accurate identification. *School Psychology Review, 45*(1), 109-132. Retrieved from https://doi.org/10.17105/SPR45-1.109-132

Wei, R. C., Pecheone, R. L., & Wilczak, K. L. (2015). Measuring what really matters. *Phi Delta Kappan, 97*(1), 8-13. doi:10.1177/0031721715602228

Werts, M. G., Carpenter, E. S., & Fewell, C. (2014). Barriers and benefits to Response to Intervention: Perceptions of special education teachers. *Rural Special Education Quarterly, 33*(2), 3-11. Retrieved from https://doi.org/10.1177/875687051403300202

Wieman, R. (2014). Using data to improve instruction: Different approaches for different goals. *Action in Teacher Education, 36*(5/6), 546-558. doi:10.1080/01626620.2014.977755

Wise, J. C., Sevcik, R. A., Morris, R. D., Lovett, M. W., Wolf, M., Kuhn, M., . . . Schwanenflugel, P. (2010). The relationship between different measures of oral

reading fluency and reading comprehension in second-grade students who evidence different oral reading fluency difficulties. *Language, Speech, and Hearing Services in Schools, 41*(3), 340–348. doi:10.1044/0161-1461(2009/08-0093)

Workman, E. (2014). *Third-grade reading policies.* Retrieved from https://www.ecs.org/clearinghouse/01/03/47/10347. pdf

Wyse, D., & Styles, M. (2007). Synthetic phonics and the teaching of reading: The debate surrounding England's Rose report. *Literacy, 41*(1), 35–42. Retrieved from https:// doi.org/10.1111/j.1467-9345.2007.00455.x

Yeh, S. S. (2005). Limiting the unintended consequences of high-stakes testing. *Education Policy Analysis Archives, 13*(43). Retrieved from http://epaa.asu.edu/epaa/v13n43/

Zinskie, C. D., & Rea, D. W. (2016). The Every Student Succeeds Act (ESSA): What it means for educators of students at risk. *National Youth-At-Risk Journal, 2(*1*),* 1-9. doi*:*10.20429/nyarj. 2016. 020101

Zumeta, R., Zirkel, P. A., & Danielson, L. (2014). Identifying specific learning disabilities: Legislation, regulations, and court decisions. *Topics in Language Disorders, 34*(1), 8–24. doi:10.1097/TLD.0000000000000006

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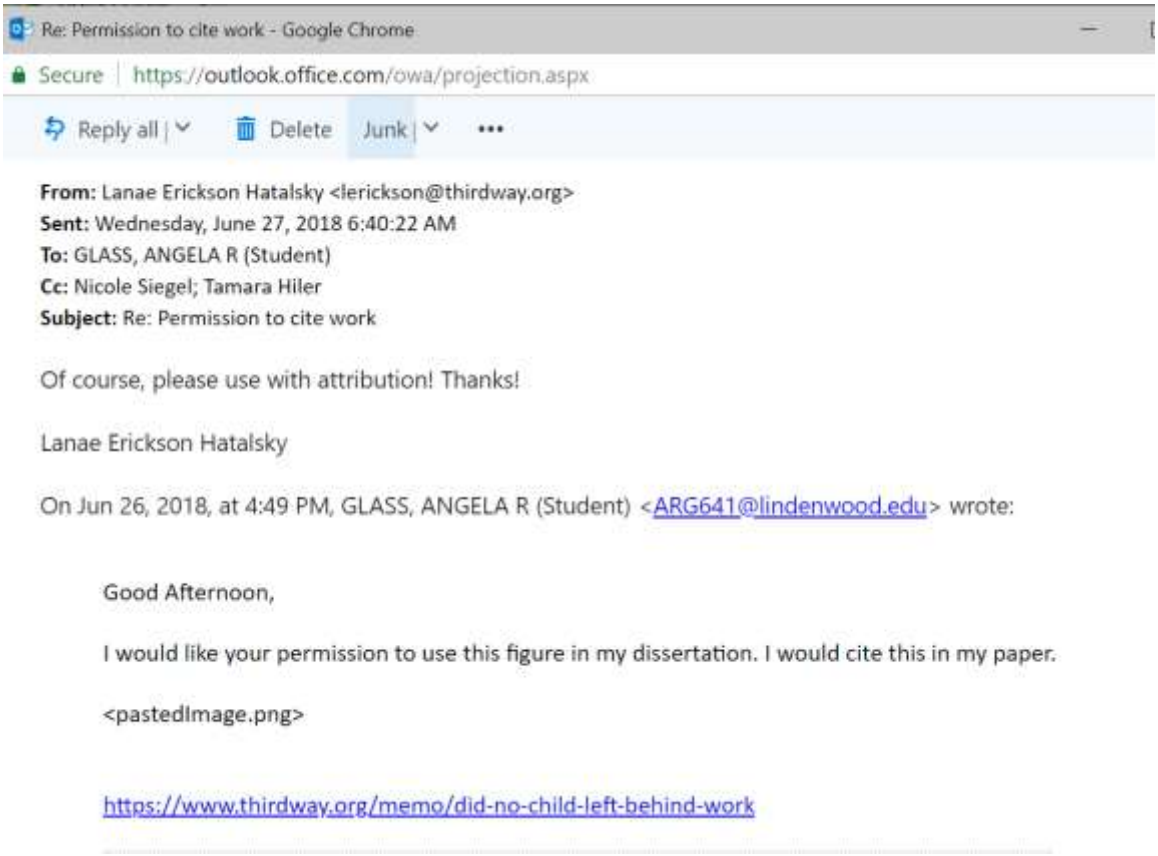

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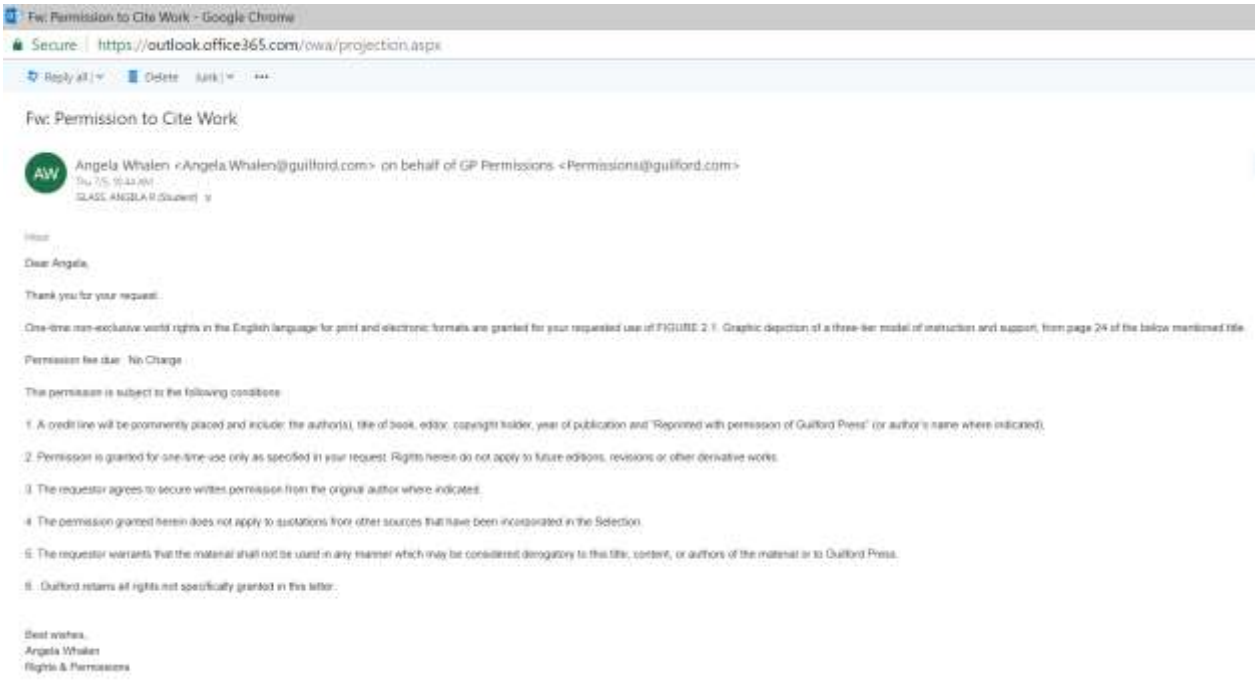

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Appendix C: Teacher's Perception Survey

Part I

Are you a certified teacher?
If no, how many years have you worked in Education?
If yes, how many years have you taught?
Do you have your Reading Certification?

Part II

How many groups of LLI do you have daily? Choose an item.

How many LLI teachers are in your school? Choose an item.

	Strongly Agree	Agree	Disagree	Strongly Disagree
I have received sufficient professional development to implement LLI.	☐	☐	☐	☐
I understand how to implement LLI.	☐	☐	☐	☐
I implement LLI with fidelity.	☐	☐	☐	☐
LLI has increased student achievement.	☐	☐	☐	☐
I am able to address the individual needs of students using LLI.	☐	☐	☐	☐
Instructional materials needed to implement LLI with fidelity are provided.	☐	☐	☐	☐
I communicate with classroom teachers regarding the academic progress of students.	☐	☐	☐	☐
I feel supported by administration.	☐	☐	☐	☐
If I have questions or concerns about LLI, I feel I can receive support.	☐	☐	☐	☐
The administration protects the time needed to implement LLI daily.	☐	☐	☐	☐

Part III

Would you recommend LLI to other educators? Choose an item.

If interested in participating in a follow up interview and/or classroom observation, please check the options below.
_____ Yes, I'd like to be contacted for a follow up interview on Leveled Literacy.
_____Yes, I'd like to be contacted for a classroom observation.

Contact email address: -
_____

Appendix D - Interview Questions - Teachers

Interview Questions for Teachers:

1. Describe your school's process of selecting students to receive LLI. (RQ 1)
2. Describe your school's process of exiting students out of LLI. (RQ 1)
3. Describe how your school uses LLI data to guide literacy instruction. (RQ 1)
4. Describe your experience with LLI and student achievement. (RQ 1)
5. Describe any additional practices implemented in your school that you perceive altered the student's reading level. (RQ 1)
6. Is there additional information you would like me to know regarding LLI? (RQ 1)

Appendix E: Interview Questions - SLT

Interview Questions for SLT:

1. Describe your school's process of selecting students to receive LLI. (RQ 1)
2. Describe your school's process of exiting students out of LLI. (RQ 1)
3. Describe how your school uses LLI data to guide literacy instruction. (RQ 1)
4. Describe your experience with LLI and student achievement. (RQ 1)
5. Describe any additional practices implemented in your school that you perceive altered a student's reading level. (RQ 1)
6. Is there additional information you would like me to know regarding LLI? (RQ 1)

Appendix F: Fidelity of LLI Implementation Tool

Administrator's Tool: Fidelity of *LLI* Implementation (Primary)

Key
0 No evidence
1 Some evidence
2 Approaching Fidelity
3 Fidelity

Odd-Numbered Lesson	0	1	2	3

Goals for Lesson:
• Teacher uses the lesson goals to plan for children's needs.
Rereading Books: *5 minutes*
• Children are invited to reread 2–3 previously read books.
• Teacher utilizes language from *Prompting Guide, Part 1* to teach for, prompt for, and reinforce effective strategic actions.
Phonics/Word Work: *5 minutes*
• Teacher uses concise language to introduce a phonics principle children need to understand.
• The teacher uses and/or creates a visual or a chart to highlight the principle and usually includes an active element for children.
New Book: *15 minutes*
• Introducing the Instructional Level Text:
  • Teacher familiarizes the children with the meaning of the text (not necessarily every page).
  • Teacher scaffolds the child's use of meaning, language, and visual information in text.
  • Teacher adjusts the kind of support children need to process the text with fluency and excellent comprehension.
• Reading the Text:
  • Each child reads the entire text either softly or silently.
  • Teacher samples oral reading and interacts briefly with children to support effective problem-solving strategies.
  • Teacher refers to *Prompting Guide, Part 1* for helpful language.
• Discussing and Revisiting the Text:
  • Teacher invites children to talk about the meaning of the text.
  • Teacher looks for evidence of children's ability to think *within, beyond* and *about* the text.
  • Teacher uses language from pages 428–431 in *When Readers Struggle* to expand children's thinking.
• Teaching Points:
  • Teacher selects a specific teaching point to explicitly teach for, prompt for, or reinforce effective strategic actions.
  • Teacher refers to *Prompting Guide, Part 1* for helpful language.
Letter/Word Work: *5 minutes*
  • Teacher guides children in some quick 'hands-on' word work.
  • Teacher uses magnetic letters, word and picture cards, and other materials to reinforce letters and words.				

Vitae

Angela R. Glass

Education

Educational Doctorate Degree in Educational Administration (Expected December 2018)
Lindenwood University

Educational Specialist Degree in Educational Administration (Spring 2014)
Lindenwood University

Master of Arts Degree in Educational Research and Psychology (Spring 1994)
University of Missouri-Kansas City

Bachelor of Arts in Psychology (Spring 1992)
University of Missouri-Columbia

Certifications

Principal Certification (K-12)
Special Reading Certification (K-12)
Reading Recovery Certification
Elementary Education (1-8)

Professional Experience

Elementary Principal July 2016 - Present
Assistant Principal July 2015 - 2016
Academic Instructional Coach 2011 – 2015
Teaching and Learning Facilitator 2009 – 2011
Reading First Coach 2006 – 2009
Literacy Specialist 2003 – 2006
Reading Recovery Teacher 1999 – 2003
Elementary Teacher 1996 - 1999