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The Long-Term Effect of Reading Recovery on Fourth Grade Reading Achievement

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This is to certify that the doctoral study by

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Abstract

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MA, Indiana Wesleyan University, 2006

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Project Study Submitted in Partial Fulfillment

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Abstract

Reading Recovery is a first-grade literacy intervention program with notable short-term benefits, but there are sustainability studies that highlight inconclusive evidence of its enduring success. It was unclear if formerly enrolled Reading Recovery students continue to have long-term literacy skill retention after exiting the literacy intervention. The problem was essential to this rural district because Reading Recovery was costly to implement, and the literacy standardized test scores remained low. The purpose of this quantitative study was to determine if formerly enrolled Reading Recovery students had sustainable literacy skills. The theoretical framework was the literacy processing theory, which entails how emergent learners develop literacy processing systems. The research question was to determine if there was a significant difference in the Indiana Statewide Testing for Educational Progress standardized test scores between the 73 formerly enrolled and 38 nonenrolled students. The independent variable was enrollment in Reading Recovery, and the dependent variable was ISTEP+ standardized literacy scores. The independent sample *t*-test results showed no statistically significant difference in ISTEP+ standardized literacy scores. The results were the basis for the creation of the 3-day professional development training for educators in grades 2 and 3. The training will promote positive social change since it will support the continued literacy progress of formerly enrolled Reading Recovery students. Students with solid literacy skills will have better future employment opportunities and higher social engagement in American society.

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Dedication

My quantitative project study is dedicated to my husband, Aaron. You have always been my constant source of strength, and you have given me a protected setting to pursue my dreams. It is with your love and generosity I have been able to ascend beyond imaginable heights. Thank you for your immeasurable sacrifices so I could achieve. My love for you is continuous and forever! There is 1 universe, 8 planets, 1 Earth, 195 countries, 5 oceans, 7.7 billion people, and I have the privilege of going through life with you.

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I want to thank my daughter, Natasha, for your love and support in this endeavor. You have been a great encourager, motivator, and supporter to me during this entire doctoral process. You will always be my beautiful angel girl.

I want to thank my sister, Melonie, for bringing Nakiah and Syris into my life. The endless joy these adorable children bring to my family is incalculable.

I want to thank, Dr. Hunter, my doctoral chair. Your commitment to my project study has been steadfast. You are a true educator – always encouraging and pushing me to think deeper and further. I appreciate your dedication to my educational journey. I will always value you and your contribution to my success. I dedicate my favorite Mother Theresa quote to you: "I can do things you cannot, you can do things I cannot; together we can do great things." Thank you, Dr. Hunter, for being a magnificent educator.

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Section 1: The Problem

Introduction

Since 1984 Reading Recovery has been an intervention program to help at-risk learners acquire literacy skills. The Reading Recovery Council of North America (RRCNA, 2017) explained that the primary goal of Reading Recovery is to provide precise and targeted instruction to the lowest achieving first-grade students. Trained Reading Recovery teachers execute lessons for the identified lowest literacy learners in first grade and expose each student to a complex set of reading and writing literacy processing skills and strategies at an accelerated pace. Clay (1998) said that after 20 weeks of intense instruction, students should be reading at the first-grade level and should continue to remain on target in terms of literacy as they move on to subsequent grades.

Problem of the Study

Several early reading intervention programs like Reading Recovery have been created and implemented in schools to help struggling readers acquire literacy skills. Since 1984 Reading Recovery has been a highly touted reading intervention program in the United States. There was research on short-term gains for the Reading Recovery first grade reading intervention program, but data indicated formerly enrolled Reading Recovery students did not sustain literacy progress two and three years after exiting the intervention program. The inconclusive results were a problem in the broader educational context. Chapman and Tunmer (2016) and May, Sirinides, Gray, and

Goldsworthy (2015) said that first-grade students do not always have long-term retainable literacy skills 2 or 3 years after successfully discontinuing the Reading Recovery intervention program.

The National Center for Education Statistics [NCES] collects group-level assessment data every 2 years from fourth-grade students across the nation. The fourth-grade student achievement data showed that there was an epidemic of low proficiency scores in what students should know and be able to do in literacy. In the United States, 37% of fourth graders read at or above the proficient level, which means two-thirds were not reading at proficiency (NCES, 2018). The low reading scores were substantial evidence that there were gaps in literacy comprehension and abilities among fledgling students who are learning foundational literacy skills. Having a reliable infrastructure of literacy skills was vital because in fourth grade and beyond, learning requires a different approach. In kindergarten through third grades, students develop learning to read skills and, in fourth grade, students begin learning and applying literacy skills that are required for them to read to learn. Conner et al. (2014) posited that emergent literacy learners in grades kindergarten to third grade should attain a robust underpinning of literacy skills. The reason is that by fourth grade because the subject matter in textbooks and other literacy materials is more complicated and confusing to comprehend. Since foundational literacy is essential, it is prudent for educators to examine the long-term sustainability of

the Reading Recovery intervention program to ensure it is useful in constructing the literacy foundation needed for lifelong reading skills.

Local Gap in Practice

A rural elementary school in southern Indiana, which served as the setting for this study had adopted and implemented the literacy intervention program Reading Recovery to help struggling literacy students. Even though this intervention program had been established and implemented since 1984 educational gaps in knowledge and practice existed among second and third grade educators and other stakeholders such as parents and administrators. The problem addressed by the study is that different stakeholder groups did not have a clear understanding of whether formerly enrolled Reading Recovery students continued to have long-term literacy skill retention after exiting the first grade. This lack of understanding caused an educational gap in knowledge among all stakeholders. The reason this problem existed was that the school did not monitor the former Reading Recovery students' success after exiting the first-grade literacy intervention, which caused an educational gap in practice. One second grade teacher at the research site study reported that she did not know about the formerly enrolled Reading Recovery students' first-grade progress. Second-grade teachers at the research site received literacy levels for each second-grade student at the beginning of the school year. The list did not identify which students were formerly enrolled or nonenrolled Reading Recovery students (see Appendix D). Every year, fourth graders participate in

the Indiana Statewide Test for Educational Progress (ISTEP+) assessment. In 2015, the Indiana Department of Education (IDoE) distributed ISTEP+ assessment results that compared local elementary school scores with Indiana average standardized test scores (see Appendix E). This comparison data was beneficial to school leaders to glean an understanding of how their students compared to other fourth grade students around the state. The negative aspect of the results was that the data was not separated into formerly enrolled and nonenrolled Reading Recovery student groups. Therefore, school stakeholders could not determine how formerly enrolled Reading Recovery students performed on the standardized assessment, which left diverse stakeholders unaware of the effectiveness of the first-grade literacy intervention. The lack of knowledge problem continued with the ISTEP+ data, which were not separated into subgroups: formerly Reading Recovery students and nonenrolled Reading Recovery students (see Appendix F). As a result, the local school stakeholders were not aware of how fourth grade formerly enrolled Reading Recovery students performed 3 years after exiting the literacy intervention program. Subgroup information would be relevant to know because 27% of fourth grade students at the setting of this study did not pass the 2017 standardized ISTEP+ assessment. To prevent educational gaps in knowledge and practice, subgroups needed to be identified and assessment data for these subgroups needed to be shared with all stakeholders.

Rationale

This study focused on the literacy achievement of fourth-grade students in one school in Indiana. One reason this grade level was chosen for the study was that it was a targeted year for high-stakes assessments. Foundational literacy skills, such as phonics, decoding, and comprehension were taught and mastered in kindergarten through third grade. The NAEP measures student performance in fourth grade after foundational literacy skills should have been mastered. Across the nation, students in fourth grade were beginning to transfer and apply learned literacy skills to more complex literacy tasks as their literacy processing systems developed and advanced.

National and state assessments, such as NAEP and ISTEP+, play a crucial role in education. Education stakeholders can use the assessment results to establish grade level baseline data, determine trends, see patterns in academic performance, and determine gaps in standards and curriculum (Snow & Matthews, 2016). According to Van Geel, Keuning, Visscher, and Fox (2016), educators need data from high-stakes assessments for monitoring purposes, so databased educational decisions can be discerned to ensure that students continued to make academic growth. This study will focus on fourth grade ISTEP+ standardized test data to answer the research question and determine if students have mastered foundational literacy skills.

Rationale for this Study

One reason for this study was that more research was needed on the long-term sustainability of the early literacy intervention of Reading Recovery. In the literature, there was a profusion of studies investigating and reporting on the short-term effects of Reading Recovery but fewer studies about the long-term sustainability research. Limited research available provided inconclusive information and conflicted perspectives regarding the effectiveness of the program's long-term sustainability. The Reading Recovery Council of North America [RRCNA] (2017) stated that 75% of formerly enrolled Reading Recovery students continued to be proficient in literacy after first grade without supplemental reading support. Chapman and Tunmer (2016), May et al. (2015), and administrators from the Madison Metropolitan School District (2014) posited that after first-grade students completed the Reading Recovery intervention program in first grade, they were unable to maintain academic growth in later grades. Thus, it was important that there be more research on the long-term effects of Reading Recovery so that there were equal opportunities to examine this topic from opposing viewpoints.

The second rationale for conducting this project study was that a consistent standardized plan for monitoring formerly enrolled Reading Recovery students was needed at the research site of this study. At the site designated for research, a uniform monitoring system did not exist to track former Reading Recovery students' progress after first grade. Therefore, educators in second grade and beyond did not have a clear

understanding of long-term literacy sustainability for these once-struggling students. Chapman and Tunmer (2016) stated that not all formerly enrolled Reading Recovery students continue to sustain literacy growth in subsequent grades. Jesson and Limbrick (2014) said that one reason literacy growth could decelerate is that as students advance in grade levels, literacy skills become more complicated. Because of the complex literacy levels, Clay (2016) stated that monitoring each formerly enrolled Reading Recovery student's progress for up to 3 years after a literacy intervention.

The monitoring of literacy skills helps to ensure that sustained literacy progress continues as the student works with more sophisticated literacy skills and strategies. Due to the sophisticated skills being taught, monitoring of students' literacy progress was imperative because it provided a comprehensive literacy profile on each student's learning strengths and weaknesses and ensured accountability in terms of instruction and assessment (Holliman et al., 2016; Slavin, 2016). If the standardized assessment results showed that formerly enrolled Reading Recovery students in fourth grade are still struggling readers, then a consistent, purposeful monitoring plan could be devised for this subgroup after exiting the intervention program in first grade.

Reading Recovery teachers deliver literacy instructional services during the school day. In the school selected for this study, Reading Recovery teachers provided daily Reading Recovery instruction to at least four identified first grade low-performing literacy students and helped classroom teachers in second through fourth grades with

small group literature groups, coteaching, and remedial group work. Even though all students were exposed to daily small group literacy lessons, standardized test data showed that some fourth-grade students were struggling readers. Twenty-seven percent of the fourth-grade students at the setting of this study did not pass the annual ISTEP+ state-mandated test. To help increase literacy scores, the district steering committee devised a school improvement goal that stated students would achieve at least 80% proficiency in ELA performance as measured by the ISTEP+ assessment. Low standardized test scores were evidence that this school has many fourth-grade students struggling with literacy concepts, skills, and standards.

The purpose of this study was to determine if formerly enrolled Reading Recovery students at the local school had long-term literacy sustainability 3 years after exiting the intervention program. The outcomes of this study would address local classroom teachers and other school stakeholders' educational gaps in knowledge and practice in terms of skills, strategies, instruction, and results for Reading Recovery. Steps to accomplish the purpose were forming subgroups (formerly enrolled Reading Recovery students and nonenrolled Reading Recovery students), examining each student's ISTEP+ standardized test data, and then determining if formerly enrolled Reading Recovery fourth grade students had long-term literacy sustainability 3 years after exiting the intervention.

The study was pertinent because Reading Recovery at the rural elementary school in this study was the primary supplemental intervention offered to the first-grade students with the lowest skills in literacy. Even though the local school used the early intervention for first grade at-risk students, stakeholders had limited knowledge regarding the formerly enrolled Reading Recovery students' long-term literacy sustainability. One possible way literacy classroom teachers could fix this issue is by identifying formerly enrolled Reading Recovery students as a subgroup starting in second grade and continuing through later grades. By forming this subgroup, classroom teachers could monitor once-struggling students' progress and determine if their literacy proficiency was progressing. Then, classroom teachers could determine if targeted interventions were needed so that academic gains could be realized.

The purpose of this study was to determine if formerly enrolled Reading Recovery students at the local school had long-term literacy sustainability 3 years after exiting the intervention program. The study will use standardized test data, and study participants will be divided into two subgroups: fourth grade formerly enrolled Reading Recovery students and fourth grade nonenrolled Reading Recovery students. This study will integrate reliable, valid, and scholarly literature about Reading Recovery. The standardized test data provided information about whether the first grade Reading Recovery intervention had long-term sustainability, or if it did not, then a plan was

considered for monitoring and supporting formerly enrolled Reading Recovery students beginning in second grade and continuing in subsequent grades.

Definition of Terms

This section has a list of terms and definitions that are specific to this project study. The vocabulary words and definitions help aid in readers understanding of the theoretical framework, literature review, and the respective research.

Cueing systems: Specific teaching methods and supports that literacy practitioners use to help literacy learners self-monitor and self-correct. A student will learn how to employ cueing systems, such as syntax, semantics, and pragmatics, when confronted with unknown words or challenging texts.

Emergent readers: A person who is acquiring foundational print, speaking, writing, listening, and word skills needed for literacy and reading comprehension.

Fluent readers: When a reader is beginning to learn and apply academic language so that the comprehension of multidisciplinary content can occur.

Indiana Statewide Test for Educational Progress (ISTEP+): An annual English/Language Arts standardized assessment given to students in third through tenth grade.

Literacy: Complex problem-solving knowledge that allows a person to read, write, speak, and listen. Literacy is developmental and can take multiple paths requiring learners to draw on prior knowledge and link new information to construct meaning.

Metacognition: A cognitive and reflective thinking process that required readers to employ a variety of literacy processes and strategies, such as monitoring of the text, self-assessing, self-correcting, and evaluating, that would expand understanding and develop comprehension.

Monitoring: Diagnostic, formative, and summative assessments used to create a learning literacy profile that allows practitioners to monitor progress and drive instruction, which improves student learning.

Running Record: A recording of students' oral reading behavior that is analyzed for structure, visual, and meaning errors.

Struggling readers: Someone who is struggling to learn to read and has limited knowledge of literacy and how literacy processes work. This causes the inability to problem-solve, link information, or make meaning.

Significance of the Study

There were three objectives to why this proposed quantitative project study was significant: school accountability to all stakeholders, fiscal responsibility, and social change. Each school district is held accountable for the education of the students that attend the schools. States have accountability requirements and are required to implement rigorous grade-level standards into the curriculum. Additionally, students must demonstrate achievement on state high-stakes assessments. When a student is struggling to master skills, the teacher is accountable for implementing interventions to

help the student achieve. At the setting for this study, the Reading Recovery intervention program had been the primary intervention implemented to improve literacy performance for struggling first-grade students. However, ISTEP+ standardized test data confirmed that a high number of fourth-grade students were not proficient in literacy. From the assessment results, school leaders, teachers, and parents were unclear which subgroup had a lower literacy performance: fourth grade formerly enrolled Reading Recovery students or fourth grade nonenrolled Reading Recovery students. Due to this lack of knowledge, it was uncertain if the school district was educating students properly, which is why this study is significant. The results of this study will show the difference in scores in the two subgroups: formerly enrolled versus nonenrolled Reading Recovery students.

The second reason this study was significant at the local level involved financial accountability. School funds were being allotted each year to the first-grade reading intervention program at a school where the budget is stressed. School districts were accountable to families, students, community stakeholders, and lawmakers to be fiscally responsible for all expenditures, including intervention programs. Due to budget deficits at the school in this study, the school district needed to be financially accountable. Debts were causing the attrition of staff members and the elimination of programs. Reading Recovery was an expensive emergent reading intervention program. The cost is significantly higher because of the student to teacher ratio of 1 to 1, which is drastically

lower than it was for the traditional classroom where a teacher to student ratio can be 20 to 1.

At the elementary school studied in this research, Reading Recovery teachers and administrators did examine first-grade students' Reading Recovery performance data. However, when the formerly enrolled Reading Recovery students reached fourth-grade, data was not analyzed to determine the long-term literacy sustainability of these students. Therefore, it was unclear if the school was being fiscally responsible by continuing to fund the Reading Recovery program or if another intervention program was needed. The results from this study were advantageous to school decision-makers when determining if the intervention program was viable and justifiable and was worth the high-cost investment.

This study was significant at the state level. There were benefits to conducting this proposed quantitative project study. One advantage of this study was that it examined a rural population of fourth grade students, and it would be performed in a community in southern Indiana. This study is significant because it could positively impact social change and make contributions to the body of professional knowledge about the long-term sustainability of the Reading Recovery program. The school district could use the results to see the value in the continued monitoring of former Reading Recovery students. Quint, Zhu, Balu, Rappaport, and DeLaurentis (2015) emphasized when elementary schools had progress monitoring plans in place, there was improved

practices and understanding about individual progress and learning. Learning to read at an early age is essential so that students will further education and employment opportunities. Students who continue to have reading issues after third grade are four times more likely or have weak literacy skills and drop out of high school before graduation (Kuchle, Edmonds, Danielson, Peterson, & Riley-Tillman, 2015; Madden & Slavin, 2017). For students to become active and engaged members of society, robust literacy education is essential beginning early in a student's life.

Research Questions

The problem was that stakeholders in one school district did not have an understanding if formerly enrolled Reading Recovery students had long-term literacy skills. The purpose of this study was to help stakeholders determine if formerly enrolled Reading Recovery students had long-term literacy skills 3 years after the first grade. A quantitative methodological design was used for this study. The research questions helped me determine if formerly enrolled Reading Recovery students had long-term literacy skills 3 years after the program.

RQ1: Based on the ISTEP+ reading comprehensive test for fourth grade students, what is the difference in terms of scores of students who were formerly enrolled in the Reading Recovery program in first grade versus those who were not enrolled in the Reading Recovery program in first grade?

H_o1: There will be no statistically significant difference in terms of fourth grade students' scores on the ISTEP+ standardized reading tests for students formerly enrolled in Reading Recovery in first grade versus those not enrolled in Reading Recovery in first grade.

H_a1: There will be a statistically significant difference in terms of fourth grade students' scores on the ISTEP+ standardized reading tests for students formerly enrolled in Reading Recovery in first grade versus those not enrolled in Reading Recovery in first grade.

Review of the Literature

Introduction

Articles from peer-reviewed scholarly journals of education were found in the databases ProQuest, Taylor & Francis, Education Source, and ERIC. Keywords and phrases used during the journal search were *early literacy*, *reading*, *comprehension*, *Reading Recovery*, *literacy interventions*, *databased learning*, *reading strategies*, *emergent literacy*, *fluent reader*, *reading difficulties*, *reading disabilities*, *motivation*, *struggling reader*, *Response to Intervention*, *literacy development*, *technology learning*, *at-risk learners*, and *literacy learning disabilities.*

I found recent project studies, so that I could glean a better understanding of planning and organizational designs. The professional organization of Reading Recovery was researched to provide insight into the Reading Recovery intervention selected for this

study. The *What Works Clearinghouse* website was utilized to compare early literacy interventions, and the *Education Week* website was used to ascertain relevant literacy educational topics and articles.

Theoretical Framework

The theoretical framework that guided this quantitative project study was the literacy processing theory. The literacy processing theory is devised around a compilation of well-known patterns and understandings about how students develop, use, and retain reading and writing processing skills to learn literacy (Clay, 1991). Clay (1977), the creator of the literacy processing theory, believed that emergent readers learn foundational literacy skills in multiple ways, and each student has a unique pathway to learning that is diverse to the person. When learning new information, decoding a word, or determining the meaning, an emergent learner will employ neural pathways in the brain to activate prior knowledge and understanding, interpret oral language, discern visual information, relay speech, analyze data, discriminate between sounds, and synthesize information. Literacy learners of all ages create meaning and understanding through experiences and environmental influences. These experiences are required for learners to acquire literacy metacognition skills such as decoding, synthesizing, and discerning meaning.

The literacy processing theory's central tenets included flexibility and problem-solving and were established to support struggling first-grade readers who had not had

success in terms of fostering their skills in reading and writing (Clay, 1991). With this theory, first-grade struggling literacy learners were explicitly taught how to take ownership of their complex literacy processing systems and became the facilitator of their learning experiences (Clay, 2001). During lessons, struggling first-grade students use appropriate level texts to learn how to activate their prior knowledge and consolidate experiences to devise a new meaning from the text. Problem-solving strategies included employing visual cues from pictures and structural cues from sentences, as well as reading strategies such as predicting, visualizations, and summarizing. Teachers trained to use this theory impart knowledge to students about how to problem-solve, self-monitor, and check for understanding. Over instructional time, students discern how to detect and correct errors when reading, which results in fluency and comprehension of the text.

The Reading Recovery framework was constructed using the literacy processing theory. Individual lessons allow beginning literacy students to learn how to problem-solve, link, and combine knowledge (Clay, 2000). The literacy processing theory's central premise is that once a student learns basic strategies such as monitoring and problem-solving, students could continue to acquire, construct, adjust, and apply new knowledge to become independent readers and writers (Clay, 2001).

One dominant theory that influenced Clay and the literacy processing theory was Piaget's constructivist theory. Clay used this theory when devising the literacy processing theory and the Reading Recovery intervention program. With the constructivist theory, personal knowledge was acquired, constructed, and adjusted to understand new ideas and develop learning (Piaget, 1954). A necessary part of acquiring, constructing, and adjusting learning was through the development of schema, or background knowledge, which is a significant component of the literacy processing theory. Creating new experiences and knowledge are not one-time opportunities but continually evolve and progress so a person can cultivate and augment understanding throughout a lifetime (Lin, 2015). Lessons have built-in strategies and skills that strengthen schemata, which in turn facilitates understanding. During daily Reading Recovery lessons, first-grade students fully engage in literacy activities that help struggling readers build a schema of new knowledge and apply it to everyday learning.

Wood, Bruner, and Ross created the model of scaffolding in 1976. These theorists believed that teachers must scaffold instruction so emergent students would have the support that was needed to problem-solve unknown information. Without instructional scaffold or support, emergent students would be unsuccessful in challenging activities. Reading Recovery teachers in the United States are trained under the literacy processing theory and use scaffolding to prompt students when encountering an unknown word. Prompting and cueing systems are vital components that Reading Recovery

teachers use to scaffold individualized lessons and teach students how to work with what is known to facilitate knowledge and understanding (Fisher & Frey, 2014). When a scaffold is offered to a student at the appropriate level, he or she can learn how to use this information to problem-solve and address challenging details and gain growth in terms of literacy skills.

Vygotsky devised the zone of proximal development theory, which asserted that for learning to occur, there must be an interaction between a student and person with a higher knowledge of what is being learned. Instructional interaction provides the appropriate amount of assistance and guidance to promote achievement. Every Reading Recovery interaction is based on one-on-one interactions between trained teachers and students. The literacy processing theory was founded on the belief that students' strengths are used during each lesson to connect and acquire foundational literacy skills.

Rumelhart's information processing theory of reading, which required students to employ their perceptual and cognitive processes along with multiple sources of knowledge to discern meaning when reading a text. It is essential that emergent readers learn to apply the perceptual and cognition processes, so their decision-making skills could be improved and knowledge about literacy could be enhanced. Rumelhart's information processing theory of reading are embedded in the literacy processing theory such as the learners' employment of verbal, visual, and cognitive processing behaviors to problem solve and attain meaning (Askew, 2018). Each Reading Recovery lesson

teaches first-grade students to draw upon and integrate prior knowledge, problem-solving, and scaffolding when self-correcting, self-monitoring, and problem-solving.

An important purpose of the literacy processing theory is that it was created to support struggling first-grade students. Educators knowledgeable of the literacy processing theory can expose first-grade students to an array of reading skills, strategies, and opportunities to discover how literacy works. Each struggling reader learns how to construct a literacy processing system tailored to the individual needs of the learner (Clay, 1991). The construction of the literacy processing system occurs when a learner is taught how to problem solve, link information, and transfer between letters, sounds, and structures to conceive meaning (Clay, 2016). Through discovery, most readers and writers begin to develop problem-solving skills and self-monitoring strategies.

Trained Reading Recovery teachers in the United States use the literacy processing theory as a basis when devising individualized guided reading lessons. The trained teachers deliver the lessons to identified first-grade, struggling readers. These individual students learn specific intervention strategies like how to monitor the reading, detect errors, and correct the errors (Clay, 1991). It was with these intensive interventions that emergent readers can accelerate learning, incorporate new skills to extend their understanding of literacy, and catch up with their grade-level peers.

A weakness of the literacy processing theory is that it was devised for and implemented when students are in the emergent learner stage. Former emergent Reading

Recovery students who experienced successful short-term literacy achievement did not always continue to sustain progress in developing literacy skills when they reached the fluent reader stage, which should be by fourth grade (Chapman & Tunmer, 2016; Schwartz, 2016; Nicholas & Parkhill, 2014). Clay (1998) said that developing a literacy processing system is a long-term process for any student, and the system continues to evolve as skills become more challenging and complex.

However, low national and state standardized assessment scores showed that some students do not continue to construct literacy processing skills when the activities become more challenging. At the national level, 63% of fourth graders did not read at or above the proficient level on the NCES (2018) assessment, and at the research study site, 27% did not pass the 2017 ISTEP+ assessment. Because some second, third, and fourth students stall in terms of literacy achievement after the first-grade intervention, perhaps some formerly enrolled Reading Recovery students' do not continue applying the literacy processing theory foundational skills after first grade.

Literacy Processing Theory and This Study

The literacy processing theory was used as a basis for this study. The literacy processing theory is appropriate for this study because the Reading Recovery intervention program was devised around the theory. Embedded in the literacy processing theory is the premise of how beginning readers learn to acquire foundational literacy skills that are needed to read and write. When a first-grade student begins to struggle with reading, the

child is taught by a highly trained Reading Recovery educator that knows and understands how a person learns to read. Through a serious of lessons, struggling readers learn how to problem solve unknown words, link information, and employ monitoring strategies. In subsequent grades, formerly enrolled Reading Recovery students are to continue using the strategies and skills learned in the intervention program such as problem-solving and checking for understanding (Clay, 1991). The literacy processing theory relates to this study's research question because this study examines the academic performance of the formerly enrolled Reading Recovery students on a fourth-grade standardized assessment to determine if literacy progress was sustained.

Struggling Readers

Learners struggle for internal reasons such as lack of maturity, lower intelligence levels, developmental delays, and poor literacy skills (Serry, Rose, & Liamputtong, 2014). External reasons for struggling students include poverty, language barriers, lack of parental and teacher support, and school curriculum (Serry et al., 2014). The school curriculum can be a barrier for struggling readers if a program is being implemented that is not research based and if the curriculum does not support students background knowledge.

Public schools across the nation are seeing a vast amount of diverse student populations. Valdiviezo (2014) studied three elementary schools in the Northeast United States and discovered English Language Learner (ELL) teachers must change teaching

practices to meet the needs of their linguistic and culturally different students to help the students have academic success. Any student, regardless of economic, culture, or demographic makeup can have literacy deficiencies. However, Uccelli et al. (2015) said that students in poverty environments and English Language Learners, typically, score lower on assessments. In 2015, an educational gap was evident between different ethnicities on the fourth grade NAEP Reading Assessment. The students scoring below the basic reading level were 48% of the African students, 48% of the American Indian students, 45% of the Hispanic students, and 21% of the White students (NAEP, 2015). The percentage of fourth-grade students who scored below the basic level in reading and qualified for free lunch was 44%, which was in comparison to 17% of the students who scored below the basic level but did not receive free lunch (NAEP, 2015).

The RRCNA (2017) explained that often, struggling readers had developed poor literacy habits that needed to be changed before intensive intervention strategies could be commenced. Struggling readers neglected information, did not integrate other sources of information to problem solve and have weakened literacy strategies, which caused the students to have a challenging time figuring out unknown words. When struggling readers continually had miscues, it disrupted the comprehension component of reading. Snow and Matthew (2016) and Murray, Munger, and Hiebert (2014) suggested that patterns could be seen in what students neglected and can be tied back to the adopted school's reading program. To repair struggling students' literacy deficits educators,

needed to teach students how to use metacognition strategies and skills to control their thinking, processing, and to correct their miscues independently.

Motivation was a crucial factor for struggling readers. Bates, D'Agostino, Gambrell, and Xu (2016) explained reading motivation played a dominant role in literacy achievement and if not addressed could contribute to the widening of the achievement gap. Teachers had a direct influence on students' motivation because students were looking for validation, personal satisfaction, and positive feedback (Noland & Richards, 2014). Another area that affected motivation was the Common Core Standards. As students progressed through grade levels, they were aware of increasing complexity and higher expectations. For struggling readers, progression becomes difficult, and they could feel frustrated and unmotivated to engage in the complex tasks required of them (Elias, 2014).

One way to improve motivation was through student choice. Santisteban (2014) said choices helped improve reading comprehension levels because students were able to read texts that related to their abilities and interests. Another way to enhance motivation was through transformational leadership, in which the teacher interacted with students inside and outside of the classroom (Noland & Richards, 2014). Reading Recovery helped to nurture motivation in struggling readers because teachers were familiar with each student's interests and could select texts individually to motivate the student (Bates et al., 2016). To motivate struggling readers, Reading Recovery teachers preselected a

stack of appropriate level picture books, and individual students chose a book from the quantity to read.

In many schools, students often get past first grade and are not serviced for reading difficulties. Foorman, Dombek, and Smith (2016) explained that elementary and intermediate grades struggling readers were ignored because there were educators who believed maturity played a significant role and these students will mature, and the reading deficits will diminish. To help struggling literacy learners, teachers must stay abreast of how to identify and assist these students. Rasinski et al. (2017) and Serry and Oberklaid (2015) explained that many struggling readers do not have supports or resources available outside of the classroom and because of this these; learners were at-risk for lower self-esteem, continued achievement failure, disengagement from school, and behavioral issues.

Galuschka, Ise, Krick, and Schulte-Korne (2014) expounded that literacy deficits affected the entire children regardless of age, not just the achievement. Students who struggled to read could develop school-related anxiety and emotional health issues, resulting in students seeking a medical diagnosis for the learning deficiency (Barquero et al., 2015; Charman, Ricketts, Dockrell, Lindsay, & Palikara, 2015; Kuchle et al., 2015). A literacy deficiency could directly influence other core subject areas such as science, math, and social studies (Peurach & Glazer, 2016; Barquero et al., 2015). Since, literacy deficits affect all aspects of academic achievement and wellbeing, examining the long-

term sustainability of the Reading Recovery intervention program would be an effective way to ensure students were maintaining proficiency and excelling as they progress through school.

Clay (1991) believed that struggling readers should receive an intervention starting in first grade because they have a full year of instruction and have adjusted to demands of school. Bates et al. (2016) stated the same belief and added that first grade was crucial because at this stage students were developing emerging literacy acquisition skills that were necessary to be able to continue to build literacy processing skills. Elias (2014) agreed that foundational reading skills acquired in primary grades are required for a life of continued learning.

History of Reading Recovery

Clay graduated from Wellington College of Education in 1945 with her primary teaching degree and began her career in literacy. In 1950, Clay came to the United States on a Fulbright Scholarship and studied developmental and clinical child psychology at the University in Minnesota. It was during this time that she began to observe the development of student literacy learning and she became more interested in how students processed literacy. Through case studies, Clay started to devise questions and concerns that did not match to any existing literacy theories. Clay (1987) discussed that when she was in training in Minnesota, she began to form concerns about the Illinois Test of Psycholinguistic Abilities Assessment because it eliminated other learning deficit factors

such as intellectual, social and emotional issues. Throughout 1960, 1970, and early 1980, Clay was employed at the University of Auckland in New Zealand where she continued to conduct studies and teach developmental psychology, consultation, testing, and measurement. During these years Clay continued to do student observations, research, and in which she began to challenge the theoretical perspectives about literacy and learning disabilities.

Clay (1966) wrote a dissertation study where she observed one hundred children in their first year of schooling. It was during these observations that she developed reliable observational tools used for emergent learners that included intellectual, social and emotional components. In 1972, Clay published *The Pattern of Complex Behavior* in which she described how emergent learners could take control of their literacy processing. It is with this study that her theory of literacy learning began to transform. Clay continued to work in classrooms with teachers, students, parents, and other educators to study and make contributions to literacy.

Her overall focus that guided her literacy work was what happened when the identification, design, and delivery of literacy was changed for struggling readers (Doyle, 2013). To locate answers to this query, in 1976 Clay began to devise Reading Recovery, an intervention that would help the lowest performing first-grade students learn literacy. Clay (2013) shared that she designed the Reading Recovery program in New Zealand over thirty years ago because students were entering first grade with a diverse mix of

issues such as differing levels of maturity, lack of exposure to literacy experiences, and delayed early literacy acquisition skills. Students with these issues were misdiagnosed or were not receiving adequate instruction. With this new intervention, Clay, her research assistant, and a group of primary educators begin to write a teachers' manual with new assumptions, identification measures, design options, and delivery methods that would offer struggling readers hope. To create authentic observations, Clay developed a one-way screen to observe and record at-risk learners. Clay and her team begin conducting field trials in poor to average schools in New Zealand and documented literate processes. During the 1979-1980 school years, one hundred New Zealand teachers were trained in Reading Recovery. The intervention program was implemented as a national literacy program across New Zealand starting in 1983. Reading Recovery was introduced to the United States in 1984 at Ohio State University.

In 1987, Clay wrote an in-depth article called *Learning to Be Learning Disabled*. Clay (1987) expressed how schools are not doing enough to prevent students from becoming labeled and that there could be other possibilities if students were treated as individual learners and were given and shown different routes of how to get desired outcomes. Over the years, Clay continued to develop the observational tool based on her observational methodology and clinical learning about developmental literacy learning. Today, the observational tool is known as *An Observational Survey of Early Literacy*

Achievement. According to the RRCNA (2017), there have been over 2.3 million students in the United States that have participated in the Reading Recovery intervention.

Reading Recovery and Struggling Readers

Reading Recovery was designed to help at-risk literacy learners the opportunity to learn with a different type of curriculum and model before being tested or labeled as special education (Clay, 2001). Reading Recovery intervention lessons were for first-grade students only. However, there were populations of students who still had learning deficits after first grade. To address this issue, Clay (2016) wrote a research-based intervention book, *Literacy Lessons Designed for Individuals*, which focused on literacy lessons that were outside the traditional Reading Recovery framework. Each lesson had been designed to address the older struggling student population and was not replicated or reused from Reading Recovery (Clay, 2016). The lessons were specific for special education and English Language Learners populations in grades first through fourth grade, so their literacy processing outcomes could be improved (Lose & Konstantellou, 2017). Briggs and Lomax (2017) explained that since 2013 researchers had been collecting data and analyzing data and the evidence was showing that the literacy lessons were contributing to improved student achievement.

Components of Reading Recovery

Clay (1991) designed Reading Recovery's foundations and multi-faceted lessons to support children's learning. The theoretical perspectives, principals, standards,

practices, implementation requirements and tools were universal among all Reading Recovery educators, trainers, and leaders around the world, which allows for continuity (Peurach & Glazer, 2016). The theory and practices were embedded in research, and there was a clear set of ideas about how to advance student learning. All Reading Recovery trainers, teachers, and leaders received extensive training about how students acquire literacy knowledge and the literacy processing theory (RRCNA, 2017). It was with the detailed lessons that students develop skills and processes that enabled the learner to progress through Reading Recovery and have continued success after exiting the program (Clay, 1991).

A critical component of Reading Recovery is the Observation Survey Reading Achievement Assessment published by Reading Recovery (RRCNA, 2018). The dominant literacy domain areas of the observational survey include reading text level, letter identification, concepts about print, writing, vocabulary, and hearing and recording sounds (May et al., 2015). Each literacy domain on the observational survey receives a stanine score, which is a raw score from one to nine (Clay, 2013). One is the lowest and nine is the highest.

Trained Reading Recovery teachers use this assessment tool at three different interval points to show a student's literacy performance level. At the beginning of the year, Reading Recovery teachers use the observational survey as a diagnostic tool to identify the lowest achieving students in first grade. The survey is used as a formative

assessment when the student exits the intervention after twelve to twenty weeks. At the end of first grade, the observation survey is administered again as a summative assessment. Teachers can compare the stanines of the students across various literacy domain tasks.

The observation survey draws upon students' strengths and offers a wide picture of a student's literacy capabilities. Reading Recovery teachers use this tool to make judgments about a first-grade student's literacy knowledge, strengths, and needs. Trained Reading Recovery teachers use the observation survey frequently; however, teachers in other grade levels do not typically use the information from the observational survey to make educational decisions (Clay, 2013).

A second crucial component of Reading Recovery is *Roaming Around the Known*. Clay (1991) explained this beginning two-week stage is vital because it helps the teacher to determine strengths and areas of weaknesses. The Reading Recovery teacher focuses on familiar, manageable tasks that allow students to build confidence and problem-solving skills. McNaughton (2014) expounded that this one-on-one time between the student and teacher is necessary, so the teacher can observe the at-risk learner and make detailed notes. It is from these observations that a comprehensive literacy plan can be devised that are individually tailored to promote the learner's competencies. During this period of transition, the Reading Recovery teacher will use a variety of media to build interest and build foundations of conversation, fluency, writing, and participation in the

reading processes (Clay, 2016). Through careful scaffolding in this stage, at-risk learners will begin to take control of their learning, skills become automatic, immediate and transferrable (McNaughton, 2014). Although *Roaming Around the Known* is a valuable tool that yields useful student data, it is often not practiced by classroom teachers because it requires a one-on-one teaching relationship (Clay, 2016). Most general education classrooms have too many students for a teacher to facilitate this kind of teaching activity.

The third component of Reading Recovery is Running Records, which are oral assessment tools that measures reading behaviors of fluency, accuracy, and comprehension. As a student reads independently, the trained Reading Recovery teacher takes detailed notes about the student's reading behaviors. Lipp and Helfrich (2016) suggested that running records should be used formally and informally in primary grades to document a complete understanding of specific reading skills and practices. Trained Reading Recovery teachers perform daily running records to determine each student's reading progress or lack of and to determine what literacy areas that the student needs work.

The Reading Recovery intervention program is built around promoting learner independence and the teacher assisting in the development of this independence (Clay, 2016). From this, students are taught strategic activities such as self-monitoring, making choices, confirming, revising, monitoring, searching, discovering, and rereading that will

help the student learn to process the text. The Reading Recovery teacher looks for such things as miscues, self-corrections, phrasing, and fluency and checks for these items for accuracy on the running record. Miscues are essential to help the teacher understand what literacy processing deficiencies the learner has. Miscues could result from the meaning of the text, structure to the language, or visually discriminations. Clay (2106) posited that self-corrections and self-monitoring behaviors are crucial to literacy processing because a student must be aware that something is incorrect, and students must employ their learned skills to find a solution.

Reading Recovery teachers use the problem-solving behaviors such as miscues, self-monitoring, and self-correcting behaviors to identify literacy processes the students are correctly employing to become proficient readers, such as pauses, patterns of mistakes, and student responses. Additionally, Reading Recovery teachers determine if the errors are visual, structure, or meaning. Running Records are a valuable tool to implement, gleaning an abundance of information about a student's literacy performance. Although it is time-consuming, perhaps teachers should perform running records on former Reading Recovery students in second to fourth grade to see if they are still using self-monitoring and self-correcting behaviors.

Codes are an essential part of running records and are used to interpret the reading record. Teachers use a systemic and universal decoding system to determine if students know letters, sounds, the overall message of the story. This coded information helps to

guide the teaching based on what the student did correct and what the student missed to match the text to the instructional level needed. Peurach and Glazer (2016) expounded that primary teachers should use this information in the next day's lesson to prompt, challenge, and support the literacy learner and build succession lessons. Reading Recovery teachers are explicitly taught how to record and calculate reading behaviors such as self-correcting, the omission of words, word substitutions, repetitions and the teacher telling the student an unknown word. Codes are also used to determine what the reader did well, pacing, and processes the child drew upon, and summations of what was observed. Other items analyzed include if the miscue or self-correction error was a visual, meaning, or structure mistake.

The fourth component of Reading Recovery is daily lessons. Jesson and Limbrick (2014) stated that the Reading Recovery format provides the identified struggling first-grade students with intensive interventions that boost literacy skills necessary to read at grade level and remain on target the remainder of first grade. McNaughton (2014) supported this and added there are an unlimited amount of developmental combinations that diverse students can take to build knowledge and obtain strategies that enable reading and writing skills to be constructed. Snow and Mathews (2016) discovered that reading is a social process that begins in the preschool age and evolves over time. In Reading Recovery, a student receives social interactions with the teacher in thirty-minute literacy lessons. The typical format includes nine steps:

rereading familiar texts, completing a running record, working with letters, working with words, composing and writing a story, hearing and recording sounds, reconstructing a cut-up story, new book introduction, and reading the new book (Clay, 2016). The teacher scaffolds each step of the lesson. The final goal of the lesson is that the student attempts a reading of the new book. When this happens, students begin to take responsibility for their learning.

Reading Recovery teachers teach students four types of cueing systems within the daily lessons. The cueing systems are semantic, syntactic, visual, and phonological. The semantic cues are used for text meaning, and syntactic cues are sentence structure. Visual cues include the graphemes, orthography, format, and layout of text. Phonological cues are the vocal sounds of language. According to Pratt and Urbanowski (2015), proficient readers deliberately employ these cues to self-monitor, and problem solve. When meaning is lost or broken, struggling students are taught how to use the cues against one another to repair meaning.

It is with the engagement of all reciprocal literacy processes learned in the daily lessons that students can continue long-term to construct, evolve, and apply new knowledge to become successful as they continue with self-regulating their literacy acquisition in different grade levels. Since, engagement of literacy processes such as cueing, social engagement, and explicit strategies are useful in daily lessons; perhaps this

type of instructional format could benefit students in subsequent grades especially former Reading Recovery students.

The fifth component of Reading Recovery is leveled texts, which is a tool that provides opportunities for students to reread, be instructed and challenged. The leveled texts are systematic level books that are used to match students' reading levels to needs, interests, and abilities. This gradient level of text difficulty provides students with an opportunity to problem-solve, gain confidence, and explore processing skills. Clay (2016) explained that primary students need a combination of easy and challenging books because the exposure and engagement to these kinds of texts, students can practice their learned processing skills and build fluency. Once fluency and skills are ingrained in a primary student's literacy processing repertoire their responses become automatic, instant, expected, and transferable (McNaughton, 2014). Large quantities of on-level texts provide elementary students with the opportunities to build competencies that successful readers need (Clay, 1991). Because of the importance of the leveled text, daily running records are taken from them. Reading Recovery teachers use this information to determine the next actions for a struggling student.

Like leveled texts used in Reading Recovery, Lexile levels are a universal reading measurement instrument that matches students' reading levels to appropriate texts. Classroom teachers of all grade levels can use the Lexile levels to assess students' reading growth because the measure is a combination of a student's reading level and a

book's reading difficulty level (Achieve3000, 2017). Many schools are transitioning to Lexile Levels to evaluate student reading development because studies show that text level plays a significant role in other content areas and the classroom. Holliman et al. (2016) posited that text levels provide classroom teachers with clues to how a student is performing and will perform in subsequent grades. Rasinski et al. (2017) agreed that being a fluent reader plays a factor in a student's literacy development. Being a proficient reader can help any student have success in other academic areas such as spelling, writing, and math.

Benefits of Reading Recovery

Teacher expertise is one benefit of Reading Recovery. May et al. (2015) explained to become a certified Reading Recovery educator one must undergo a comprehensive postgraduate study. Then, licensed Reading Recovery teachers must continue professional development six times a school year with a trained teacher leader. During this training, teachers learn and understand the literacy processing theory about how primary children acquire literacy skills, nature of student learning difficulties, and target interventions scientifically proven to strengthen reading literacy skills (Peurach & Glazer, 2016). McNaughton (2014) added to this by stating Reading Recovery teachers are experts who understand how students develop cognitively, and how to respond to the individual student needs with research and theory-based interventions. Johnston and Goatley (2014) reported that Reading Recovery educators are adaptive experts because

they are taught how to adapt lessons, curriculum, and strategies instantly to maximize student literacy achievement. The Reading Recovery Council of North America (2018) posited that approximately 75% of students who successfully exit the Reading Recovery intervention could perform at grade level in literacy. A Reading Recovery's student's reading success can be attributed to the expert teacher knowledge and teachers' commitment to continued growth in the literacy field.

Different factors help Reading Recovery teachers stay experts in their field and for interventions to be successful. Foorman, Dombek, and Smith (2016) explained that for an intervention to be effective a teacher must be highly qualified, receive continual professional development, and support from classroom teachers and school leaders. Reflection is another factor that helps Reading Recovery teachers stay effective because it plays an immense role in teacher training and professionalism. Teachers are required to participate and observe in behind the glass observations, which allows for responsive conservational teaching, reflection, and growth of new perspectives and ideas. Slavin (2016) explained that all members of the Reading Recovery community partner to reflect, grow, and learn as professionals. It is through this strong commitment to the program that leads to higher level of effectiveness.

The second benefit of Reading Recovery is the amount of data collected on each identified student. Peurach and Glazer (2016) explained Reading Recovery teachers are trained to use diagnostic, formative, and summative assessments to drive instruction that

will accelerate at-risk learners. Teachers are required to record observational survey data for each student that participates in Reading Recovery in the International Data Center. The center collects the data, analyzes the data, and uses it for national reports and academic research (RRCNA, 2018). In the United States, data has been collected and examined since the program's inception in 1984, and there is data on more than two million Reading Recovery students (RRCNA 2018; Rodgers, 2016). A teacher observes and writes anecdotal records during the daily one-on-one lessons, examines it for next steps, and places the data recording in a student's personalized literacy profile. Throughout the intervention, there is an accumulation of first-grade students' literacy records, and a comprehensive literacy profile emerges about each student. This data profile allows Reading Recovery teachers to use the information to inform instruction for the next day and subsequent days and make databased educational decisions.

Another benefit of Reading Recovery is the inclusion of all student populations. Clay (1991) posited that first-grade children are included in Reading Recovery regardless of their intelligence level, limited English proficiency, mental challenges, and possible learning disability. There is only one exception, and it is if a student has been retained in first grade because the student is receiving another full year of instruction (RRCNA, 2018). Reading Recovery teachers are advocates for each first-grade student who is serviced by Reading Recovery. Students take different pathways when learning and the educational plan must be tailored to individual needs. Reading Recovery teachers work

diligently to ensure full educational inclusion by writing an individualized learning plan for each struggling student participating in Reading Recovery.

Students of diversity can bring many learning challenges into the classroom including linguistic and psychological struggles. McNaughton (2014) explained that bilingual children who are in the beginning stages of learning literacy benefit from a strong oral language base and instruction that is infused with oral language explicit lessons. Reading Recovery is beneficial for bilingual students because the intervention program was built on an oral language foundation. Broeder and Kistemaker (2015) reported that linguistically diverse students have challenges in school because there is a disconnection between their spoken language and academic language. Valdiviezo (2014) postulated that most standardized tests are designed for English users and not for students of diversity, and students with cultural and linguistic backgrounds often have challenges with the tests.

To help bridge the language and cultural barriers, Reading Recovery teachers receive specialized training about linguistic and psychological processes so that the teacher can meet an array of student needs. Bates et al. (2016) wrote that Reading Recovery teachers go through embedded professional development training sessions that enable them to refine skills for all dynamics of students. These expert teachers have a wide range of strategies to help students who have emotional, cognitive, and motivational issues to build a literacy processing system.

Being a preventive program is the fourth benefit of Reading Recovery. The RRCNA (2018) suggested that students at-risk be placed in Reading Recovery before testing the student for a learning disability. Reading Recovery provides one-on-one tutoring for at-risk students before these students become labeled or tested for a learning disability. Clay (2016) explained that many students could learn and grow in literacy with the curriculum the school adopted. However, some first-grade students are unable to learn from the traditional school literacy curriculum due to student language barriers and lack of student background knowledge. For these students, Reading Recovery is the supplemental intensive intervention that offers students an opportunity to learn using a different type of approach.

Clay (2016) explained that Reading Recovery teaches students how to control their learning processes, by linking different sources and building upon common knowledge. These reading strategies are seen during daily Reading Recovery lessons because struggling readers fully engage in an array of sophisticated and interactive literacy activities. In a study conducted over ten years, Reading Recovery led to a decrease in the achievement gap among first-grade students (D'Agostino & Rodgers, 2014). When students successfully exited Reading Recovery, they had proficiency in reading that is equal to other grade level students who were not in the intervention program (Clay, 1998). Due to a high number of students being successful with the short-

term intervention, Reading Recovery has proven to be a preventive program for many struggling students.

A dissenting view involving Reading Recovery is that it does not serve the students who most need it. May et al. (2015) wrote that some schools that participated in the i3 study manipulated the guidelines set forth by RRCNA. In some cases, the lowest selection of first-grade students was not serviced for the intervention or initially selected and then was withdrawn from the program (May et al., 2015). One possible reason for this is that elementary schools are required to report data on all identified Reading Recovery students serviced. If school staff members believe that a struggling first grade student will not be successful in the Reading Recovery program, then he or she is removed from the intervention, and another low performing student is given the intervention (Chapman & Tunmer, 2015).

This practice is found occurring in other countries as well. Chapman and Tunmer (2015) discovered the lowest literacy first-grade students in New Zealand school were often not placed in Reading Recovery because the schools were basing the selection of students upon the degree of success the child is predicted to have. Serry et al. (2014) reported that elementary schools in Australia were selecting first-grade students based on other criteria and not on the lowest performance. Another way school district is getting around not choosing the weakest performing literacy students is by alternating the variances in the observation survey which causes the weight of the subscales to be

different across schools (May et al., 2015). Due to these practices, some first-grade students are eliminated from the lowest quadrant and do not qualify for intervention services. Some elementary schools in the United States, New Zealand, and Australia used other criteria to select students for Reading Recovery including teacher nomination. The RRCNA (2018) is aware of these practices and is opposed to them stating that Reading Recovery guidelines have been created to avoid these practices.

A second dissenting view is that Reading Recovery does not work for some first-grade students. One example is students with dyslexia. There are many qualitative reports suggest that students who have dyslexia struggle with reading and do not have success with Reading Recovery (Serry et al., 2014). The lack of success is because the Reading Recovery program does not support an in-depth phonological awareness curriculum (Shanahan, 2014; Serry et al., 2014). First-grade students who struggle with dyslexia, benefit from direct instruction that explicitly teaches phonological awareness (Holliman et al., 2014).

Researchers Chapman and Tunmer (2015) criticized the reading intervention by stating that Reading Recovery does a disservice for students who need phonological awareness processing skills. These groups of first-grade students are not able to grow in literacy achievement because the intensive phonological instruction that they need is not being provided by teachers. RRCNA (2018) has responded to these claims and believes

phonological awareness is a result of reading and writing, which is why it is not separately taught in the daily Reading Recovery lessons.

A third dissenting view is that Reading Recovery is a fragmented program that is a one-time event in a first-grade students learning. Historically, Reading Recovery has been a short-term first grade intensive tutoring intervention that lasts between twelve and twenty weeks. After twenty weeks of intense instruction, a student is either discontinued successfully or referred for further assessments (D'Agostino & Harmey, 2016). The Grade 1 Reading Recovery intervention program does not serve students in other grade levels.

To exit Reading Recovery successfully, a student must be at a basic level of proficiency on the Observation Survey. A basic level rating can allow for a variance in text reading and achievement levels (D'Agostino et al., 2017). Proponents of Reading Recovery stated that due to first-grade students' different reading and achievement levels when exiting Reading Recovery, there is a risk factor that some former Reading Recovery students will not continue to make future literacy success. This risk can be detrimental to a second and third grade student's literacy achievement because after Reading Recovery these students are rarely monitored leaving educators unsure of the program's long-term sustainability. Cook et al. (2017) believed a monitoring plan should be implemented in every school after a student exits Reading Recovery to ensure continued progress. The continuous monitoring plan could be written to tailor individual

student's strengths and areas of weaknesses based on the learning profile gathered during their time in Reading Recovery and subsequent grades.

If a first-grade student is receiving Reading Recovery, it is because the regular classroom instruction or curriculum is no longer working to help the struggling student learn literacy skills. The Reading Recovery intervention program has received criticism from classroom educators because it is seen as a disjointed learning activity. Rodgers (2016) explained the disconnection is the way the Reading Recovery program is implemented in the school causing a lack of cohesion among the program implementers and the classroom teachers. Jesson and Limbrick (2014) expounded that Reading Recovery is not a cohesive program that is embedded throughout the school-wide curriculum. Instead, it is an independent first-grade program usually implemented by teachers specially trained in Reading Recovery theory and practices.

One reason the program is viewed as a disjointed activity is that the instructional strategies incorporated during the Reading Recovery lessons are not typically ones used in the regular classroom lessons such as thirty-minute one-on-one tutoring. Another reason the program is seen as a disjointed activity is classroom teachers and Reading Recovery teachers do not always discuss what strategies are being worked on during the daily tutoring lessons. Foorman et al. (2016) suggested that to fix these issues Reading Recovery teachers and first-grade classroom teachers need to collaborate to match skills and instructional strategies from Reading Recovery to regular classroom instruction. If

this happens, the collaborative partnerships will help build a support system for the first-grade student that will develop literacy skills.

A final dissenting view of Reading Recovery is the cost. Fried (2016) explained that the high cost of the program is because one highly specialized Reading Recovery teacher provides intensive literacy interventions to one student at a time for a thirty-minute session. During a regular school day, a Reading Recovery teacher dispenses Reading Recovery lessons to approximately four identified struggling students. The lessons commence five days a week for a period of 12 to 20 weeks. Because the Reading Recovery teacher works one-on-one with each struggling reader for thirty minutes a day, the cost per pupil of the program is high (Cassidy, Ortlieb & Grote-Garcia, 2016). Studies have discovered that schools struggle with long-term sustainability because districts often run out of money to maintain the intervention program (Foorman et al., 2016; May et al., 2015).

Cost plays a significant factor in hiring and maintaining qualified professionals to be Reading Recovery teachers. Serry et al. (2014) expounded that often Reading Recovery programs do not have enough support staff to complete the program the way it was intended. There are adverse effects if schools do not implement the program with fidelity due to cost issues. Serry and Okerland (2015) posited that if there is enough staff to service the program, then the achievement gap could continue to widen in first grade.

Reading Recovery has seen a decline in school districts implementing Reading Recovery due to district financial constraints.

Reading Recovery is one literacy intervention support program that has been utilized in the United States for the past thirty years, but the program carries an expensive price tag. The reasons for the high cost are year-long teacher training, materials, supplies, staffing, and professional development. Nashville Public Schools in Tennessee reported that it costs their district 7.2 million dollars a year to have the Reading Recovery program (Gonzales, 2018). Historically, school districts have used local, state, and federal monies to implement the program with a high-level of fidelity (RRCNA, 2018). Many districts across the nation, like Nashville Public Schools, are facing financial plights because there is new national legislation allowing for school choice, frail economic revenues in communities, and reduction in educational funding at the state and federal levels. With funding cuts, school districts across the nation are being forced to eliminate programs to save money. Reading Recovery programs across the country are feeling the effects of school district budget difficulties. RRCNA (2018) reported that in 2017 there were 3,190 elementary schools utilizing Reading Recovery, which has decreased from 10,622 schools in 2002.

Federal and state funding is being diverted away from public schools to pay for charter schools and student vouchers programs (Zaniewski & Higgins, 2017). Due to open school enrollment, elementary students are transferring to charter schools or private

schools using government vouchers to pay the high-cost tuition. Thompson (2016) explained that this decline in student enrollment is causing public schools to be in financial distress or having to close permanently. Since 2011, Indiana has shifted 520 million dollars away from public schools and into student choice voucher programs (Walker, 2017). When monies continue to leave public schools, school districts must compensate for reducing funding and often intervention support programs are reduced or eradicated, like Reading Recovery. Charter schools have received negative attention because money is being shifted away from public education and given to these schools. To show how charter schools can benefit education, researchers Campbell and Brown (2017) stated that in New York City the charter schools have had a positive social change impact because more students are graduating high school.

Another reason an array of public schools has economic hardships is that they must allot monies for school security. Due to school shootings across the nation, a lot of discussions have transpired regarding school security. Safety officials, school personnel, and legislators have discussed ideas about how to keep schools safe including adding school resource officers, arming teachers, installing security cameras, and placing fencing around the perimeter. The Governor of Indiana reported that the state plans to invest millions of dollars in school security over the next few years (Burnette, 2018). In Florida, efforts are underway to place in schools one resource officer for every 1,000 students (Blad, 2018). The proposed safety features come at an elevating cost to abating

school budgets. Walker (2017) expounded that when programs, like Reading Recovery, are trimmed school districts are unable to ensure that all students will be prepared to be college or career ready.

Since intervention programs are being reduced or eliminated due to financial constraints, elementary schools must devise creative ways to keep the programs. When schools remove intervention programs, it can be a challenging endeavor for a regular classroom teacher to help low performing students catch up to grade-level (Serry & Oberklaid, 2015). One way to alleviate some of the cost of Reading Recovery is to make it a whole-school collaborative implementation approach. By using this whole-school model more school staff members could participate. The new inclusion approach could incorporate classroom teachers, paraprofessionals, speech pathologists, volunteer tutors, parents, and reading specialists. Speech pathologists are beneficial because they can provide intervention instruction to struggling elementary students who have oral processing and language related issues. Parents could be an asset to the whole school model. According to researchers Jung and Zhang (2016), children perform better academically if parents are actively engaged in school activities and schoolwork. Messiou et al. (2016) supported a collaborative approach because it provokes a stimulating professional discourse among all educators and stakeholders that could continue to generate new ideas and ways of thinking.

School districts in Ireland have been providing whole school intervention support that is comparable to Reading Recovery lessons. The differentiated curriculum modified after Reading Recovery activities is delivered to individual and small groups of first-grade students at the same time with the collaboration of diverse teaching staff, such as paraprofessionals, specialized education teachers, and classroom teachers. The school districts are showing success with increasing students' literacy proficiencies (Higgins, Fitzgerald, & Howard, 2015). When collaboration is fostered among the teaching staff, mutual support, flexibility, and new ways of working are established (Messiou et al., 2016). Using a whole school approach is one way to implement Reading Recovery at a lower cost, foster literacy skills for struggling readers, and reinforce student learning and achievement.

The Reading Recovery program provides first-grade struggling students with the necessary literacy precursors such as print and sound related skills, language, and knowledge skills (Snow & Matthews, 2016). It was important that first-grade students mastered early literacy skills before advancing to other grade levels. Connor et al. (2014) expounded that fourth-grade students needed a solid understanding of language skills, text structure, vocabulary, and reading comprehension skills to be proficient in text-specific literacy processes. When examining the first-grade Reading Recovery curriculum and the literacy skills assessed on the fourth- grade standardized ISTEP+ test, I discovered that several literacy components aligned.

One way the Reading Recovery curriculum and ISTEP+ assessment aligned was that they both utilized fiction and nonfiction texts to assess students' comprehension levels. Students in first through fourth grades needed to develop six salient metacognition strategies to extend their literacy comprehension processing systems. The metacognition strategies included searching, selecting, activating schema, inferring, self-monitoring, evaluating, and linking processes (Clay, 2001). Students commenced learning metacognition strategies when they were in first grade Reading Recovery and continued in successive grade levels. It was essential that students master metacognition strategies if he or she was going to be a fluent reader by fourth grade. The reason was that the reading strategies were assessed on the Grade 4 standardized tests through constructed responses and multiple-choice questions (IDoE, 2017). The Grade 1 Reading Recovery curriculum and the Grade 4 assessment required that students demonstrated knowledge about characters, setting, text features, vocabulary, and critical story events to make connections and provide text evidence (RRCNA, 2018; IDoE, 2017).

A second way the Reading Recovery curriculum and ISTEP+ aligned were that they both required fourth-grade students to apply foundational literacy skills to demonstrate reading fluency, language conventions, and speaking. In Reading Recovery, students were engaged in one-on-one or teacher facilitated discussions incorporating appropriate text levels to promote oral language and advance students' reading abilities (Lipp & Helfrich, 2016). During the talks, first-grade students demonstrated knowledge

about letter-sound relationships, syllables, morphology, and parts of speech. In fourth grade, students continued to build upon these concepts throughout the school year and were expected to apply the concepts and demonstrate their learning on the ISTEP+ assessment through written expression responses, multiple-choice questions, and a writing prompt (IDoE, 2017).

Two areas not addressed in Reading Recovery but were assessed on the ISTEP+ assessment in fourth grade were figurative language and comparing different points of view. Foorman et al. (2016) and Snow and Matthew (2016) explained that figurative language and comparing different points of view are part of the unconstrained skills list because they required higher order thinking and because readers continued to work on the skills throughout their lifetime. Other unconstrained skills measured on the ISTEP+ assessment included vocabulary, background knowledge, and comprehension.

Students in Reading Recovery did not have the cognitive ability to discern figurative language and comparing. Instead, the students in Reading Recovery focused on fluency and building literacy processes (RRCNA, 2018). Students in fourth grade did have the cognitive ability to discern figurative language and compare complex stories because they were transitioning from learning to read to reading to learn, which were prerequisite to reading and comprehending at a higher level.

Response to Intervention and Reading Recovery

One type of literacy intervention used in schools across the nation is the Response to Intervention (RTI) learning approach. It is a preventive three-tiered model that helps at-risk literacy learners by giving targeted interventions to students who are exhibiting evidence of a literacy struggle (Sparks, 2016). The Reading Recovery intervention is a vital component of the RTI model because teachers incorporate evidenced-based interventions, teachers make educational decisions based on data, and teachers collect data daily (Sparks, 2016; Sharp, Sanders, Noltemeyer, Hoffman, & Boone, 2015).

There are three tiers in the RTI learning model. The first tier is for the all students achieving at the appropriate grade level with standard classroom instruction and occasional interventions. Connor et al. (2014) discovered that core classroom curriculum and instruction benefits most learners, but not all learners will achieve in this manner. Once identified to have a learning deficit, a student is moved to a higher tier based on the severity of the learning issue. Tier Two is estimated to have around 25% of students. These learners need short-term, skill-specific lessons to have success (Sparks, 2016). Classroom teachers administer targeted interventions three or four days a week to a small group of struggling learners. Differentiation activities include modeling, guided practice, and remediation work with combinations of learning opportunities to boost student's literacy knowledge and skill level (Serry & Okerklaid, 2015).

Tier Three is for struggling students who need intensive one-on-one instruction for up to five days a week, which is the Reading Recovery model. Research shows that when students are given the appropriate required supports, positive performance outcomes can be achieved (Sharp, 2015). Tier Three of the RTI model has many similar characteristics of the Reading Recovery intervention program. Examples include one-to-one responsive teaching, systematic and explicit instructional approaches, and the interventions occur beyond the standard classroom instruction (Rodgers, 2016; Serry et al., 2014).

Just like Reading Recovery, there can be many challenges when implementing the RTI preventive learning model. Challenges include enough funding to hire qualified educators and the fidelity of implementation (Sparks, 2016). Due to budget cuts at the state and national level, schools are being forced to reevaluate intervention capabilities including RTI and Reading Recovery (Kuchle et al., 2015). Sometimes elementary schools are not able to implement a model like RTI with fidelity due to staffing and financial hardships. Often, at-risk literacy learners placed in Tier One are not able to make enough gains because at this tier there are not enough extra supports. If this happens, the student can become further behind in literacy skills.

Historically, Reading Recovery has been a disjointed program that only serviced the first-grade students with the lowest score on the observation survey. However, one school district in California wanted to change the program and expand the Reading

Recovery intervention into a school wide RTI model. For the district to be able to accomplish this educational endeavor, the leaders of the movement utilized and cultivated the talents, knowledge, and resources of the professionals employed (Brown & Baker, 2018). The new model required that there is continuous collaboration between the leaders at the central office, building level principals, teachers, and Reading Recovery personnel. This type of educational commitment is crucial to implementing the new model because it allowed the different educators to work together to help diverse struggling literacy learners navigate different paths to reach the same common outcomes (Askew, 2018). This nexus worked, and school professionals are collectively making informed educational decisions that will impact policy, practices, capacity, and will help to change students' literacy lives for the better.

An essential task of literacy practitioners is to prepare elementary students to be confident, fluent readers and writers, and teach the skills and strategies needed to be successful (Holliman & Hurry, 2013). Accountability measures have been established at the national, state, and school levels to ensure students are progressing and achieving literacy proficiency. Legislation has been written and implemented at the national and state levels to promote school accountability and action. Every Child Succeeds Act (ESSA) is a law that was established in 2015 to ensure all public-school students have exposure to rigorous academic standards and an equal opportunity to learn (Education Week, 2015). Besides the educational standards, ESSA requires statewide assessments,

evidence-based interventions, and accountability (United States Department of Education, 2018).

The Common Core Standards Initiative (CCSI) (2018) explained that standardized summative assessments are necessary because they offer insight into what students are mastering at given points. This learning profile can help ensure elementary students learn what is expected to be college or career ready. The nationally recognized standardized achievement assessment for students in fourth and eighth grade is the National Assessment of Educational Progress (NAEP). This reading comprehension assessment is voluntary and is administered to students across the nation every two years.

Accountability is enforced at the state level through rigorous standards, school improvement plans, and the required standardized assessments. Indiana, the site of this study, did not adopt the Common Core State Standards, even though most of the states did. Instead, the stringent Indiana Academic Standards were designed by a plethora of educational professionals across the state and are tailored to each grade level and content area. School districts in Indiana are required to submit detailed school improvement plans every three years (IDoE, 2018). The guidelines for the school improvement plan stated that schools must use standardized test data and select one content area that students exhibited weak academic performance (IDoE, 2018). Then, schools must write specific academic goals and performance objectives that will help increase student learning (IDoE, 2018).

The standardized English/Language Arts achievement test is the ISTEP+ assessment, and it is given in the spring semester to students in third grade to tenth grade. The assessment is a measurement of individual student's academic performance and proficiency of the Indiana Academic Standards (IDoE, 2018). The test contains literacy items that measure reading comprehension, phonological awareness, technical text features, sophisticated vocabulary, and writing. To ensure student success, Indiana implements a student-centered accountability system. This system was devised so schools could close the achievement gap, provide student growth, and assess school performance (IDoE, 2018). Schools are held accountable and receive a yearly rating based on a rating scale of A to F. The rating is based on three performance domains: ISTEP assessment results, student growth and other measures such as graduation score and college and career readiness scores (IDoE, 2018).

School districts are being held accountable through databased instruction. According to The United States Department of Education, all educators and school leaders should be using data frequently to drive instruction (NCES, 2017). Baker and Brown (2018) shared that collecting and analyzing data at the state, district, and local level is key to ensuring a high level of program fidelity, refinement, and student success. However, researchers have discovered that many school educators lack the knowledge and skills to be data literate (Mandinach & Gummer, 2016; Mandinach & Jimerson, 2016; Poortman & Schildkamp, 2016). For teachers to be data literate, they must utilize

diagnostic, formative and summative data that is both quantitative and qualitative to make informed decisions regarding elementary students' reading progress (Mandinach & Gummer, 2016; Mandinach & Jimerson, 2016). Elementary teachers need to use a triangulation of data approach that includes a social domain and a cognitive domain such as achievement, motivation, attitudes, attendance, behavior, and health (Mandinach & Jimmerson, 2016). Using a comprehensive data approach allows elementary educators to capture a complete understanding of a learner's strengths and weaknesses (Hoogland et al., 2016). Then, the elementary educator can prescribe an intervention plan that will foster student learning.

Being data literate can offer benefits for elementary teachers. Teachers can use data to inform instruction, problem-solve, and improve the academic performance of students, which will enhance the overall teacher's effectiveness and accountability. Doubet, Hockett, and Brighton (2016) expounded if an educator lacks data knowledge, the achievement gap between high and low achieving learners can grow. The achievement gap in elementary school can widen because data impacts all components of students learning from the delivery of lessons, curriculum choices, and teaching strategies and methods.

Reading Recovery teachers are trained to be data literate. These professionals know how to utilize diagnostic, formative, and summative data continually to ensure first-grade students enrolled in the Reading Recovery program are making daily

achievement gains. Running Records are a form of data that is recorded daily and placed in the student's literacy profiles. Recovery teachers also use data as evidence when determining whether a first-grade student should be successfully discontinued or referred for additional testing. Accountability is high for Reading Recovery teachers because yearly information, such as student demographics, observation survey data, text levels, and exiting status are collected and recorded to the IDEC (Lomax, 2018). The IDEC uses the data to contrast and compare comparison groups comprised of former Reading Recovery students.

Clay (2014) expounded that all struggling first-grade children should be able to participate in Reading Recovery including students with dyslexia challenges. Proponents of Reading Recovery have argued that Reading Recovery does not benefit dyslexic students. According to Gabriel (2018), there is an abundance of controversy about how to best to identify and provide interventions for struggling first-grade students with dyslexia. Reading Recovery is working to ensure accountability for dyslexia specific students. Work is being done to communicate how the Reading Recovery theory and pedagogy are aligned with the policies, concepts, and vocabulary for dyslexic learners (Doyle, 2018). When this happens, these first-grade students can be immersed in an intervention program that has a higher capacity to meet their individual literacy learning needs.

Accountability for monitoring and collecting data on former Reading Recovery students often stifles once students leave the Reading Recovery intervention program in first grade. Research in this study has shown that teachers in grades two to four are not always data literate, which leaves a gap in knowledge and practice about whether former Reading Recovery students have continued success. In an opposing view, D'Agostino and Harmey (2016) argued that the Reading Recovery program is a short-term intervention and should not be held accountable for long-term sustainability.

What Works Clearinghouse (WWC) (n.d.) reviews and assesses an array of educational programs, products, and practices, so education professionals have research-based information when making instructional decisions. Four early literacy interventions were examined to determine how each program compares to Reading Recovery. WWC (n.d.) utilized an effectiveness rating: positive, potentially positive, mixed, no discernable, potentially negative, and negative. The intervention programs are rated by the outcome domains and the number of positive effects. In Appendix C, I have enclosed a table that compares the four early literacy interventions.

Reading Recovery is a one-on-one intervention, for Grade 1 students, with the instruction given by trained teachers. According to the WWC (2013), Reading Recovery had two strong evidence effectiveness ratings in Alphabetics and Overall Reading Achievement, which was evidence that the intervention had positive effects on learning outcomes. Alphabetics had an improvement index of 21 points, and Overall Reading

Achievement had an improvement index of 27 points. Comprehension and Reading Fluency received an effectiveness rating of potentially positive, which was evidence that Reading Recovery had a positive effect without contrary evidence (WWC, 2013). Comprehension had an improvement index of 14 points and Reading Fluency's improvement index was 46 points. Schwartz (2018) disagreed with the WWC information because it has not been updated since the i3 final report was published in 2016, and he felt the newest study would increase Reading Recovery's effectiveness ratings over other early intervention programs. Currently, Reading Recovery is ranked third among the interventions (Schwartz, 2018).

A second early literacy intervention program analyzed was Success for All, a K-4 whole-school model where students are placed in reading groups based on ability. WWC (2017) reported that Success for All received one positive rating for Alphabetics, with an improvement index of 9 points. Reading Fluency had a positive effectiveness rating with an improvement index of 12 points. Comprehension and Reading Achievement areas received mixed ratings with no reported improvements. This intervention literacy program is different from Reading Recovery because teachers and paraprofessionals administered daily tutoring to struggling students (WWC, 2017).

A third program analyzed was the Leveled Literacy Intervention, which classroom teachers administered explicit instruction to struggling students in kindergarten to second grade on a short-term basis. WWC (2017) reported that the Leveled Literacy

Intervention had positive effects in the Overall Reading Achievement area with an improvement index of 11 points. Reading Fluency had potentially positive effects with an improvement index of 11 points. Alphabetics had no discernable effects but had an improvement index of 5 points. Like Reading Recovery, the Leveled Literacy Intervention can be costly to implement. A school district would have a start-up fee of approximately 10,000 dollars to purchase the leveled readers for grades K to 2 (WWC, 2017).

The last early literacy intervention compared against Reading Recovery is Fast ForWord, which is a short-term computer-based language and reading program. Early literacy students participated in the computer intervention five days a week for between 30 to 100 minutes per day. The WWC (2013) reported that the Fast ForWord intervention had mixed effectiveness ratings for Alphabets and Overall Comprehension with no reported improvement indexes. For the Reading Fluency area, the intervention received a zero-effectiveness rating. One difference between Reading Recovery and Fast ForWord was that Fast ForWord could be purchased by parents and used at home. Another difference was the Reading Recovery requires a person to be present during the lesson and engage in conversation, where students' work could work independently on the Fast ForWord program.

Implications

This study compared standardized test data of two subgroups: fourth grade formerly enrolled Reading Recovery students and fourth-grade nonenrolled Reading Recovery students. The state-mandated standardized assessment results were used to determine if the first-grade Reading Recovery intervention had long-term sustainability at the rural elementary school in this study. One possible project direction is to create a professional development training and monitoring plan for teachers in Grades 2 and 3. The three-day professional development plan could be designed around the Reading Recovery framework and could be used with second-and-third grade formerly enrolled Reading Recovery students to ensure literacy progress continues.

Summary

Clay (1991), a literacy processing theorist, believed that all primary students should have the opportunity to learn to read and write. Clay (1991) understood that when students enter school, they arrive with different literacy readiness levels. No matter what pathway a student takes to learn, Clay (1991) believed it is essential that all students are proficient in literacy to be successful in school, careers, and in the community in which the student lives. The Reading Recovery intervention program was founded on these beliefs, and principles established for this intervention program ensured struggling literacy students were offered a different path to learn. The RRCNA (2018) said that its

vision is to “ensure that children who struggle in learning to read and write gain the skills, for a literate and productive future” (p. 1).

Reading Recovery is one early literacy intervention program designed to help struggling readers and prepare them to be successful readers and writers. The Reading Recovery program offers many benefits such as one-on-one tutoring, tailored lessons, and highly trained educators. Inversely, there are negative attributes such as cost and not being all-inclusive. When compared to other early intervention programs in the short term, Reading Recovery produced positive outcomes. However, the long-term effects are debated among literacy researchers both nationally and internationally.

Accountability had significantly increased in schools across the nation in databased decisions, RTI, standardized assessments, and school and teacher performance effectiveness. Even though accountability had increased, many teachers were not monitoring former Reading Recovery students' literacy progress in grades two to four. Lack of monitoring and accountability were prevalent issues in the setting for this study because the school district was unaware of how these students performed three years after exiting the intervention program. This study was relevant in helping one school system fill in the lack of practice and knowledge by determining if the Reading Recovery program had a long-term impact on literacy learning. It was essential to know if students were continuing to gain skills as they progress through school and become college and career ready.

Section 2 discusses the methodology. First, the research design and approach, sample population, sample size, and setting for the research are explained. Next, data collection tools and materials that are needed to conduct the study are shared. Then, information for data collection and data analysis is described. The final part of Section 2 includes assumptions, limitations, delimitations, and information regarding how participants were protected from harm.

Section 2: The Methodology

Research Design and Approach

The methodological approach for this project study was quantitative, which is used to explain, predict, or confirm phenomena. The problem in this study is that there is inconclusive evidence regarding Reading Recovery's long-term effectiveness at the local school district level and at the state assessment level. This study examined archived fourth grade ISTEP+ summative standardized assessment test scores for the local school which used Reading Recovery to determine whether the program was effective. Since this study is quantitative in nature, there was one dependent variable that was changed by other factors and one independent variable, which stands alone and was unchanged by other factors.

Quantitative research is numerical and used to determine if there is a significant relationship or correlation between two or more variables (Babbie, 2017). This type of methodology involves making a confirmation about theory or practice and deducing

meaning (Leedy & Ormrod, 2016). With the quantitative methodology approach, standardized instruments are used to amass numerical data (Frankfort-Nachmias & Leon-Guerrero, 2015). The fundamental goal of this study was to determine the difference in ISTEP+ standardized test scores of fourth-grade students between those who were formerly enrolled and those not enrolled in the Reading Recovery program in first grade. The information gleaned will help determine if the Reading Recovery's long-term retention claim held for one elementary school in Southern Indiana.

The methodology research design for this study was a quasi-experimental design. The independent variable is used to measure the effects on the dependent variable (Leedy & Ormrod, 2016). Frankfort-Nachmias and Leon-Guerrero (2015) said that with the quasi-experimental design, students are placed in only one independent variable subgroup, and the ISTEP+ standardized test scores remains independent of each other. There are several reasons why the quasi-experimental design was chosen for this study. One reason this methodological design was appropriate was that archived 2017 ISTEP+ standardized assessment data was used, which fourth grade students could logically be placed into one of two groups: formerly enrolled and nonenrolled. First-grade students were assigned to Reading Recovery in first grade based on summative scores from the Reading Recovery Observation Survey Assessment, and the lowest performing first-grade students received interventions through this program. Fourth-grade students who participated in the first-grade intervention program were assigned to the formerly

enrolled group. Fourth-grade students who did not score low on the observation survey assessment and did not receive Reading Recovery services were assigned to the nonenrolled group.

A second reason this research design was appropriate was that it was not dependent upon one researcher's observation of individual human subjects, but instead compared the performance of two subgroups. The single measure for this study was literacy achievement scores on the ISTEP+ standardized achievement test. The research question was intended to determine what the difference is between fourth grade ISTEP+ standardized reading assessment scores of formerly enrolled and nonenrolled Reading Recovery students. Standardized test scores and parametric statistics were used to prove or disprove the hypothesis.

Setting and Sample

The sample size was essential to this study because only specific methodological designs could be used on small populations. To increase the validity of the statistical design, Leedy and Ormrod (2016) recommended using a sample population of at least 30 participants. A power analysis was performed to reduce Type I and Type II errors. Type One errors occur when a true null hypothesis is rejected. Type Two errors occur when a false null hypothesis is not rejected. Cohen's *d* measure of effect test was the statistical power analysis implemented in this study. Cohen's *d* measure of effect test measures in standard deviations the size of the effect between the ISTEP+ test scores for the formerly

enrolled and nonenrolled Reading Recovery students. The results of the two-tailed *t-t*est had an effect size of .3164 and a significance level of .05. The power analysis was 80% and the sample size exceeded the minimum requirement of 101 (n = 111).

The population for this study was all fourth-grade students, in one specific rural school in Indiana, who took the ISTEP+ assessment in 2017. The total sample size for this study was 111 students, with 60 males and 51 females. To be included in this study, students must have been a fourth grader at the time of this study and had exposure to most school district adopted grade level curriculum and Indiana state-mandated standards. Additionally, students with Individual Educational Plans were eligible to participate in this study if the Case Conference Committee, comprised of educators, administrators, and parents felt that the student was academically capable taking the ISTEP+ assessment instead of the alternate test.

Sample groups were retrospectively assigned as 38 students who participated in the Reading Recovery intervention as first-grade students and 73 nonenrolled Reading Recovery students. In the formerly enrolled Reading Recovery intervention group, there were 27 males and 11 females. In the nonenrolled Reading Recovery group, there were 33 males and 40 females. The age of the fourth-grade participants was in the range of 10 to 11 years old. All fourth-grade students were eligible and selected as study participants if they partook in the spring 2017 ISTEP+ assessment.

This population and archived literacy standardized assessment data were chosen for this study because fourth grade is an essential year for national assessments such as the NAEP. Students in kindergarten to third grade learn foundational literacy skills that are crucial to literacy longevity (Bates et al., 2016). Since fourth grade is when students begin to transfer and apply learned literacy skills from earlier elementary to more complex literacy tasks, it is essential to check for mastery of foundational skills.

Fourth grade students with severe cognitive disabilities took an alternate standards-based performance assessment, the Indiana Standards Tool for Alternate Reporting (ISTAR). ISTAR scores were not used in this study. One reason the participants were excluded from this study was that the questions and results were scored on a different scale than the ISTEP+ test. The ISTAR results were reported using a different performance rubric instead of a composite score like the ISTEP+ assessment. The performance rubric categories were developing proficiency, meeting proficiency, and exceeding proficiency with a minimum score of 200 and a maximum score of 500 (IDoE, 2017). A second reason the ISTAR participants were excluded from this study was that the students who took the ISTAR had severe academic deficits that limited them from learning the grade level curriculum and state standards. The IDoE (2017) reported that to take the ISTAR assessment students must have an Individualized Educational Plan and need an array of daily supports.

Instrumentation and Materials

The independent variable for this research study was the enrollment in Reading Recovery, and the dependent variable for this study was the ISTEP+ standardized literacy scores. Formerly enrolled Reading Recovery students were the treatment group and were given classroom and supplemental instruction with the Reading Recovery literacy teachers. Nonenrolled Reading Recovery students were provided with only regular classroom curriculum. The ISTEP+ standardized literacy composite scores were comprised of fiction and non-fiction texts, vocabulary, and writing (IDoE, 2017). The literacy score encompassed skills and concepts that extended the student's processing system by using problem-solving, drawing inferences, activating prior knowledge, making connections, drawing conclusions, determining the main idea, and responding to texts through writing.

Literacy composite data were analyzed using the Grade 4 ISTEP+ 2017 assessment. The school district stored the raw data in a data warehouse that was username and password protected. Only specific school administrative personnel had access to the data warehouse information. The director of assessment distributed the ISTEP+ assessment data to teachers, school board members, or parents. The analyzed data was password protected.

The Indiana Department of Education worked diligently to ensure the reliability and validity of the annual ISTEP+ assessment. According to the IDoE (2017), the

ISTEP+ evaluation was subjected to a myriad of tests to ensure the accuracy and reliability to measure student performance of the Indiana state standards. An independent report produced by Roeber and Briggs (2016) explained that ISTEP+ test was a highly reliable assessment to use for attaining ELA student performance scores. The ISTEP+ assessment had undergone significant tests for validity. The IDoE (2017) explained that a systematic process and a collaborative endeavor were used that involved educators and state educational employees. The systematic design process was used to devise a correlation between test questions and taught state standards.

Protection of Participants' Rights

Whether the design was qualitative or quantitative, a researcher must be abreast of research ethics (Leedy & Ormrod, 2016). I had to adhere to ethics by ensuring confidentiality, obtaining informed consent, and protecting participants from harm. Walden University has implemented many checks throughout the doctoral process to ensure ethics are addressed and properly handled (Center for Research Quality, 2015). Before I could collect any data and begin the analysis process, the Internal Review Board (IRB) at Walden University required approval. There was necessary ethical research paperwork that had to be completed and submitted to the IRB. After IRB approved the Data Use Agreement Form, I obtained a signature from the director of assessment for the selected school district.

The Walden Center for Research Quality (2015) advocated for the safety of the participants of the study. Since the researcher was implementing archived data, it reduces the chance that harm will be inflected (Leedy & Ormrod, 2016). Confidentiality was an essential ethical component. To ensure privacy, I removed all names from the standardized test data and assigned each student name to a number. To further ensure privacy, each student received a code representing participation in the formerly enrolled Reading Recovery or nonenrolled Reading Recovery. Any personally identifying information was eliminated from the data to ensure privacy and confidentiality.

Data Collection and Analysis

IRB granted permission to collect and analyze data in August 2018. The IRB approval number is 08-15-18-0657498. I completed a Data Use Agreement Form (see Appendix B). After receiving permission to access data, several steps were taken before the analysis process could begin. First, the research site school's Assessment Director coded the ISTEP+ standardized test data to protect students' identity. The formerly enrolled Reading Recovery students received the 'RR' code and the nonenrolled Reading Recovery students received the 'E' code. For the second step, the district's Assessment Director transferred the archived standardized assessment data electronically to the researcher through Google Docs. Then, I converted the standardized test data from Google Docs to Microsoft Excel, so the data was more compatible with SPSS. Finally, the Microsoft Excel standardized assessment data file was uploaded into the SPSS

software Program by the researcher. The same two subgroup codes were used for the Independent Samples *t*-Test, the Cohen's *d* Measure of Effect Test and the two-tailed analysis to ensure consistency and validity of the results.

Next, I commenced with data collection and analysis. This research design entailed that I utilized archived 2017 ISTEP+ standardized test data that was stored in a database, which the selected school district had purchased to house all data records. The data was transferred to the researcher after IRB approval via email. Data was backed up on an external hard drive and locked at my home office. I stored the data through security measures such as controlled access, and the computer was protected through an unpublished password. The data was secured under an unidentifiable title, and data will be retained for five years. Then, I will destroy all files on the computer.

Inferential and parametric statistic tools were employed to analyze data and to answer the research question. An Independent Samples *t*-Test with a two-tailed significance value was the statistical analyses chosen. The Independent Samples *t*-Test was employed because it assumed that the subjects were independent of one another and had no effect on each other (Frankfort-Nachmias & Leon-Guerrero, 2015). A two-tailed hypothesis was the appropriate statistic tool to use because it showed if there was a symmetrical distribution in the statistical mean difference between fourth grade formerly enrolled Reading Recovery students' scores and the fourth-grade nonenrolled Reading Recovery students' scores. These tests were used by the researcher to determine the

statistical difference in ISTEP+ scores for the fourth-grade students who took the standardized assessment. There was one independent variable group: enrollment in Reading Recovery.

The Independent Samples *t*-Tests produced *p*-values, mean scores, standard deviations, and significant levels. The averages of the literacy scores for the enrollment group compared to the non-enrollment groups were computed, and a significance score was given in a decimal form. The null hypothesis was accepted if the alpha for the Independent Samples *t*-Test had a significance of .05 or higher. The results determined if the null hypothesis was rejected, or if the alternative hypothesis was accepted, which was based on if the significant value was lower than or equal to .05.

The independent variable for the research was the enrollment in Reading Recovery. The independent variable was categorical, rather than nominal. The dependent variable was the fourth-grade students' literacy composite test scores on the ISTEP+ standardized assessment and was a continuous variable. In the Frankfort-Nachmias and Leon-Guerrero (2015) statistical guide, the dependent variable was at the interval level and demonstrated how much larger or smaller the ISTEP+ composite scores were to one another.

The effect size was a crucial statistical number because it measured the degree of association between the independent variable and the dependent variable (Frankfort-Nachmias & Leon-Guerrero, 2015). The effect size had to be 0.5 or slightly higher, to

have medium effect strength. In this study, Cohen's *d* Measure of Effect Size test was utilized to determine if there was a small, medium, or large effect size. The SPSS statistical software was used to calculate the statistical power for the Independent Samples *t*-Test, to obtain *p*-values, and determine the Cohen *d* effect size. The different results produced by the statistic tests aided in establishing if there was a statistical difference in the fourth-grade students' ISTEP+ standardized reading assessment scores for the formerly enrolled Reading Recovery and the nonenrolled Reading Recovery students.

Assumptions, Limitations, and Delimitations

Leedy and Ormrod (2016) stated that research studies need assumptions that frame the researcher's beliefs and experiences regarding collecting and analyzing data. One assumption for this study was that the teachers who administered the Reading Recovery intervention to first-grade students were highly qualified. A second assumption was that the Reading Recovery teachers implemented the lessons with fidelity. Another assumption was that the students who participated in the literacy intervention were the lowest struggling readers among the first-grade students.

Limitations were weaknesses that can cause researchers to question the validity and reliability of the study (Leedy & Ormrod, 2016). There were three limitations of this project study: small sample size, the time frame to collect data, and demographics of the subjects included in the study. The small sample size (n = 111) may have limited

generalizability to represent a larger population (Babbie, 2017). The second limitation of this project study was the time frame to collect data. This study only incorporated one school year of data. Babbie (2017) explained that one year of data collection limits researchers from examining the patterns or trends over an extended period. The third limitation of this project study was the demographics of the subjects. The impact limitation of this study was that the subjects and data were from one rural, high poverty elementary school in southern Indiana. The sample groups were homogeneous, and English was the first language spoken by students. Therefore, the study might not apply to students in a large, urban area where English was spoken as the second language. Deducing generalizations from this study should be made with caution.

Delimitations describe the boundaries the researcher in this study had set and what the researcher was not going to include (Leedy & Ormrod, 2016). I examined the long-term sustainability of Reading Recovery using 111 subjects to measure growth. Quantitative analysis principles were utilized by the researcher to collect, organize, and analyze data and determine if one literacy intervention program had long-term sustainability. Student and teacher interviews were not to be included in this study since it was a quantitative analysis study.

Data Analysis

Reading Recovery was a prevalent literacy intervention program implemented around the world in countries such as the United States, Australia, and New Zealand.

Even though this program had sustained in the United States since 1984, there were conflicting viewpoints. D'Agostino et al. (2017) discovered evidence that Reading Recovery did not have long-term effectiveness when measured in subsequent grades, while Clay (2016) argued that formerly enrolled Reading Recovery students continued to make progress and read at the appropriate grade level after exiting the intervention program.

To further investigate the long-term effectiveness of Reading Recovery, this study focused on one fourth-grade cohort in a rural elementary school setting. The 2017 fourth grade archived standardized test data was collected, and inferential and parametric statistics were used to analyze the data. From the data, inferences were drawn about whether the formerly enrolled Reading Recovery students had long-term literacy sustainability after three years in one school setting. Additionally, the results were studied so that an answer could be obtained to the research question: Based on the ISTEP+ reading comprehensive test for fourth-grade students, what is the difference in the scores of students who were formerly enrolled in the Reading Recovery program in first grade and those who were not enrolled in the Reading Recovery program in first grade?

Results

Fourth-grade students at the study's school site participated in the spring 2017 ISTEP+ standardized assessment. Table 1 displayed the group statistic information computed by the statistical test Independent Samples *t*-Test. The *t*-Test compared the mean ISTEP+ standardized scale scores for the formerly enrolled Reading Recovery group and the nonenrolled Reading Recovery group. The students in the formerly enrolled Reading Recovery group participated in the literacy intervention three years before taking the ISTEP+ assessment. The 2017 ISTEP+ assessment included 111 subjects with an enrollment disparity between the groups: nonenrolled Reading Recovery and formerly enrolled Reading Recovery. The nonenrolled Reading Recovery group (n = 79) had more than double the students than the formerly enrolled Reading Recovery group (n = 32). There was a considerable gender difference among the formerly enrolled Reading Recovery students. More males (n = 27) participated in the assessment than females (n = 11), which equated to 44% more male students than female students. The females had a marginally higher representation in the nonenrolled Reading Recovery group (n = 40), while the nonenrolled Reading Recovery male representation was slightly lower (n = 33).

Table 1

Formerly Enrolled and Nonenrolled Reading Recovery Students' ISTEP+ Standardized Test Scores

Subject	*N*	*Mean*	*Std. Deviation*	*Std. Error Mean*
RR	32	466.72	46.633	8.244
E	79	481.42	46.319	5.211

As part of the independent samples *t*-Test, an outlier statistical test was completed to ensure that all values followed the usual pattern. No outliers were present in the standardized test data, as assessed by the Shapiro-Wilks statistical test ($p > .05$). It is important to run the boxplot statistical test for outliers because if there were outliers, they could have adversely affected the results of the independent samples *t*-Test. The mean scores of both groups were examined to determine the average ISTEP+ test score. The formerly enrolled Reading Recovery group had a mean score of ($M = 466.72$), and the nonenrolled Reading Recovery group had a mean score of ($M = 481.42$). The nonenrolled Reading Recovery group had a mean score that was slightly higher with the mean difference of 15.70 scale score points, which was a 9.69% difference. The goal of this study was to answer the research question and determine the difference in the scores

of students who were formerly enrolled in the Reading Recovery program in first grade and those who were not enrolled in the Reading Recovery program in first grade.

Table 2

Independent Samples t-Test

	Levene's Test for Equal Variances							95% Confidence Int. of the Diff.	
	F	Sig.	t	df	Sign. (2-tailed)	Mean Diff.	Stand. Error Diff.	**Lower**	**Upper**
Equal Var. Assumed	*.043*	*.83*	1.51	109	.134	14.69	9.72	-33.97	4.57
Equal Var. Not Assumed			1.50	57.1	.137	14.69	9.75	-34.22	4.83

An independent samples *t*-test was conducted to determine if fourth grade standardized test scores had an equal variance in the population. The first step in interpreting the results was calculating the Levene's Test for Equality of Variances significant value (*p*-value). The values showed that the two sets of standardized test scores came from populations with equal variance. The significance value was $p = .836$, which was higher than 0.05. There was homogeneity of variances for the ISTEP+

standardized test scores for the formerly enrolled Reading Recovery students and the nonenrolled Reading Recovery students, as assessed by the Levene's Test for Equality of Variances. The last four columns of Table 2 were used to determine the mean difference, which comprised the standard error, 95% upper, and lower confidence intervals. The mean standardized test score for nonenrolled Reading Recovery student was 14.69 (*SE* = 9.725) higher than the formerly enrolled Reading Recovery mean standardized test score.

Study Outcomes

The data analysis results of the 2017 summative standardized ISTEP+ assessment scores provided educational stakeholders with the preliminary outcomes of the Independent *t*-Test. The test compared standardized test data for the independent variable group: enrollment in Reading Recovery. To determine if the mean difference was statistically significant, the *t*-value, degrees of freedom, and the significant (2-tailed) columns were examined. The test results did not reach statistical significance, although there was a small difference in standardized test scores between formerly enrolled Reading Recovery and nonenrolled Reading Recovery students with nonenrolled students scoring higher than formerly enrolled students, $M = 14.69$, $SE = 9.72$, $t(109) = 1.512$, $p = .134$.

The results were found to be statistically non-significant between the means ($p > .05$), and therefore, the alternative hypothesis was rejected, and the null hypothesis was accepted. The Cohen's *d* Measure of Effect test, which accompanied the *t*-Test, was

conducted to measure the effect size of the enrollment groups' ISTEP+ standardized test scores. Information from Table 1 was used to calculate the effect size, which included the number of participates, the mean calculations, and the standard deviations. Cohen's *d* test results emphasized the degree of the difference when two means were compared. The Cohen's *d* test result was 0.3164, which meant the means of the groups differed .3 standard deviations, which was a small-medium effect size.

Based upon the standardized assessment results from one rural school district shown in this quantitative study, the students who made gains in Reading Recovery and exited the program in first grade did not continue to sustain long-term growth. The findings were consistent with three studies that claimed that formerly enrolled Reading Recovery students do not have sustained literacy growth D'Agostino et al. (2017) who noted that first-grade students who exited the Reading Recovery intervention program in their study did not continue to produce literacy gains in later grades, May et al. (2015) who concluded that students' long-term progress after exiting Reading Recovery was inconclusive in the i3 longitudinal study, and Jason and Limbrick (2014) who explained in their study that formerly enrolled Reading Recovery students scored below the average levels as fourth graders.

Mokhtari et al. (2015) advocated that all literacy learners need to be immersed in a robust literacy program during the first three school years to ensure that the foundational skills of learning to read are established and sustainable. Reading Recovery

was a personalized approach to literacy learning, and the curriculum was tailored to differentiate each struggling learners' needs. However, when a student was in a general education classroom, personalized learning did not always occur (Molnar & Herold, 2018). A possible outcome of not having a supported and tailored instructional approach after exiting Reading Recovery is that the literacy learner can have difficulty with attaining literacy skills in subsequent grades.

Research studies have suggested that to prevent formerly enrolled Reading Recovery students from regressing or stalling; the students should be offered additional supports in second and third grades. These studies included Jesson and Limbrick (2014) who recommended that for formerly enrolled Reading Recovery students to continue making literacy increases after exiting the literacy intervention additional supports may be necessary, and D'Agostino et al. (2017) proposed that formerly enrolled Reading Recovery students receive a comprehensive literacy agenda immediately following the completion of the intervention program. To help facilitate sustained academic progress, perhaps formerly enrolled Reading Recovery students need to be identified and placed into a literacy subgroup for the second and third grades. Molnar and Herold (2018) explained that schools need to determine each student's present level of achievement and develop detailed action plans for each student. If formerly enrolled Reading Recovery students were in a subgroup, the educators in second and third grades could monitor the students for sustained growth and achievement.

To summarize, the results from this study found that formerly enrolled Reading Recovery did not continue to have long-term sustainability as measured by the ISTEP+ standardized assessment. In conclusion, there were 32 formerly enrolled Reading Recovery students and 79 nonenrolled Reading Recovery students. An independent samples *t*-test was administered to determine if there were differences in the standardized test scores between the two groups. The data showed there were no outliers present, as assessed by the Shapiro-Wilk's test. The Levene's Test for Equality of Variances showed variances were homogeneous ($p = .836$). The nonenrolled Reading Recovery students had higher standardized test scores ($M = 481.42$, $SD = 46.319$) than formerly enrolled Reading Recovery students ($M = 466.72$, $SD = 46.633$), resulting in a non-statistical difference, $M = 14.69$, $t(109) = 1.512$, $p = .134$, $d = 0.3164$.

While three other research studies measured long-term sustainability using different standardized assessments, the assessment outcomes were consistent that formerly enrolled Reading Recovery students did not always have sustained long-term progress. All three long-term sustainability result studies had implications for this quantitative study. Laureate Education (2016f) specified the results were advantageous and relevant to stakeholders because a social conversation to progress educational attainment can occur. Since this was a small-scale study based upon one elementary school in a rural community, further research on long-term sustainability is warranted.

The project of this study is a result of the outcome that formerly enrolled Reading Recovery students did not continue to have sustained success after exiting the first-grade intervention. The project deliverable from the outcome of the results is a 3-day professional development program designed for educators in Grades 2 and 3. During professional development training, educators would learn different facets of literacy that parallels the Reading Recovery framework. Implementing the various components will help formerly enrolled Reading Recovery students continue to sustain progress. First, educators will learn how to conduct, interpret, and implement Running Records into the curriculum. Next, educators would receive training on research-based reading strategies, prompts, and cues proven to be effective in a literacy program. Then, an example of a thirty-minute literacy schedule will be introduced, so educators can understand how to build a robust literacy schedule. Included in the training will be partial day training for parents to attend. The parent training sessions will help to cultivate a literacy partnership between home and school. Parents will leave the training with an understanding of how to implement different metacognition strategies.

Section 3: The Project

Introduction

The project for this quantitative study is a comprehensive 3-day literacy professional development plan for educators in grades 2 and 3 (see Appendix A). This professional development training is constructed around the Reading Recovery model and includes materials that foster the literacy needs of formerly enrolled Reading Recovery students. The RRCNA (2018) said that Reading Recovery is a highly successful program for first graders, with 75% of students passing the intervention program successfully. However, there are questions about what happens to formerly enrolled Reading Recovery students' literacy development after first grade. Often, educators in grades 2 and 3 do not have the specific literacy training needed to teach metacognition strategies and verbal cues (Fried, 2016). This professional development training program is devised to help educators construct knowledge about how formerly enrolled Reading Recovery students learn. Additionally, professional development training is created to give teachers insights to help preserve what these students have learned and tools to help enhance literacy and sustain reading progress.

Rationale

This quantitative study was designed to measure if there was a significant difference in terms of standardized test scores between two subgroups: students who were formerly enrolled and those who were not enrolled in the Reading Recovery program in

first grade. The ISTEP+ reading standardized assessment for fourth grade students was used to answer the research question. This standardized test data was analyzed, and the conclusion was that the results did not lead to a statistically significant difference between the two subgroups. The nonenrolled Reading Recovery students passed the ISTEP+ standardized assessment at a marginally higher rate than the formerly enrolled Reading Recovery students. The results were not surprising considering that the RRCNA (2018) said that 75% of first-grade students who graduated Reading Recovery successfully after 12 to 20 weeks of daily instruction. In this section, there are two rationales for the creation of the 3-day professional development training project.

The first rationale for the 3-day professional development training is that not all students continue to make progress after graduating Reading Recovery. Formerly enrolled Reading Recovery students received specifically tailored instruction in first grade using the literacy processing model. Moreover, Reading Recovery teachers received an immense amount of training before being licensed and continued training after certification. However, first grade general education teachers do not possess an understanding of how the brain acquires literacy skills that are needed to read (Fried, 2016; Hanford, 2019). Possible reasons were that general classroom educators in grades 2 and 3 do not have intensive literacy training to teach reading and metacognition skills to once-struggling readers. The elementary school in this study used Reading Recovery as the primary reading intervention to assist struggling first-grade students. The 3-day

professional development workshop can help educators in grades 2 and 3 with the knowledge and skills regarding how to teach literacy to formerly enrolled Reading Recovery students.

A second rationale for the 3-day professional development training is because formerly enrolled Reading Recovery fourth grade students at this specific school in Indiana do not always have a literacy growth data monitoring plan after graduating first grade. During the 20-week intervention, each Reading Recovery teacher collected reading fluency data daily for each student serviced and made educational decisions based on the gathered information. Because of variations in terms of text reading, skills, and knowledge, it was paramount that formerly enrolled Reading Recovery students receive monitoring every week to ensure progress was occurring.

The student data monitoring plan devised for this 3-day project followed a similar format to the student data monitoring plan used in the Reading Recovery intervention. The data monitoring plan checks to ensure that once-struggling readers continue to apply foundational skills to problem solve, combine knowledge, strengthen schemata processes, and enhance understanding. Additionally, the monitoring plan was built to align with Indiana state academic literacy standards, which are objectives that outline what a student should be able to do in a specific grade level. Acquiring literacy skills is an active ongoing process that incorporates complex operations such as inferencing, synthesizing, and evaluating. Therefore, grade 2 and 3 teachers need to have monitoring plans

available. Then, they can conduct literacy assessments at regular intervals that glean useful information so that students can construct skills and strategies that will propel their literacy development. The 3-day professional development training integrates a monitoring plan that teachers can use for each formerly enrolled Reading Recovery student.

Review of the Literature

Introduction

The literature review was based upon peer-reviewed scholarly articles found in the ProQuest, Taylor & Francis, Education Source, and ERIC. Keywords used in this search were *metacognition*, *strategies*, *inferring*, *connections*, *evaluating*, *synthesizing*, *foundational literacy skills*, *emergent readers*, *early readers*, *transitional readers*, *fluent readers*, *Lexile levels, high frequency words, monitoring, data, literacy skills, reading strategies,* and *self-monitoring.*

The professional development project is appropriate to address the problem in this study. The problem is that there is inconclusive evidence regarding Reading Recovery's long-term effectiveness. Students in grades 2 and 3 need caregiver involvement, explicit instruction in specific metacognition skills at developmentally appropriate levels, and highly trained educators. Another way the research was used to guide the professional development project was in terms of the type of data which was needed to monitor students' literacy acquisition. It was determined from the literature review that

quantitative data through the implementation of diagnostic, formative, and summative assessments were best approaches to capture students' comprehensive literacy understanding.

Parent Partnerships

It is essential that formerly enrolled Reading Recovery students sustain literacy skills developed during the first-grade literacy intervention. One way to accomplish this is for the school district to nurture a partnership between home and school. Caregivers can help literacy educators examine literacy sustainability issues through a different lens and promote literacy development and growth. Hemmerechts (2017) said that there is a direct correlation between literacy activities at home and school because students who read at home have a more diverse vocabulary. Students who receive exposure to books have a more positive attitude toward reading, which can result in higher literacy skills.

There are many advantages to having a collaborative partnership between home and school, such as fostering awareness, forming cohesion, encouraging alliances, establishing a reliable support system for the child, and promoting collective decision making (Foorman, 2016; Serry & Oberklaid, 2015). However, for the partnership to work, elementary students' caregivers in the home need proper literacy training about how to instruct their child in literacy learning. Additionally, it is salient to teach caregivers about the different stages of literacy learning a child will go through when learning foundational literacy skills. Once caregivers have received literacy training,

they will be more aware of their role in the student's literacy learning process (Valdiviezo, 2014). When the external school supports are present, elementary students' confidence levels rise, there is continued literacy achievement, and there is evidence of higher engagement in school (Rasinski et al., 2017; Serry & Oberklaid, 2015). Therefore, a partnership between the school and home is paramount to help elementary students sustain growth as literacy learners.

Caregiver Training

Emergent literacy students are in the beginning stages of literacy. Clay (1991) explained that students in this phase have a child-centered outlook but can problem solve and use diverse cognitive processes. McNaughton (2014) expounded emergent learners cultivate literacy processes in daily experiences such as engaging in dialogue, reading, and writing. Teachers can assist in the development of the literacy processes by providing an assortment of literacy experiences in the classroom. Emergent literacy learners gain knowledge of how to integrate constrained skills and unconstrained skills. Constrained literacy skills comprise skills that are finite and can be mastered, such as the learning alphabet and spelling conventions. Unconstrained literacy skills are lifelong learning skills because students are continually building on them, such as developing vocabulary, schema, fluency, comprehension, listening comprehension, writing, and communication (Foorman et al., 2016; Snow & Matthews, 2016; Rohde, 2015). Although all students have diverse literacy needs and abilities, attaining constrained and

unconstrained skills are requisite to being competent at reading and comprehending at an advanced level.

It is a necessity that emergent readers gain knowledge of how written and oral language works. To help facilitate these structures, elementary teachers must be responsive to learning and have a collection of teaching approaches. Written foundational work encompasses the layout of pages, and hand and eye movements. Clay (2016) stated that reading enters the brain through the eyes; therefore, emergent learners need to understand directional schema. These progressions of movements, involving spaces between words, visual details of words, read from left to right, from top to bottom, and begin on the left page and go to the right page are necessary for a student to learn the fundamentals of literacy. The directional literacy processes can be difficult for various students. Clay (2016) explained that it is due to poor motor coordination, impulsiveness, and lack of maturity.

Another foundational literacy skill is the development of phonological awareness, which is the oral sounds of language. Rohde (2015) stated that several emerging literacy learners have complexity with letter-sound relationships, which are a critical skill in literacy development because it can be a predictor of a learning disability. As a component of phonological awareness, students become skilled at onsets and rimes. Onsets contain the beginning section of a word and are comprised of one to three consonants. Rimes include the end parts of words that have an identical pattern or

rhyme. Rhyming can have an exigent demand on emergent readers, especially for struggling literacy students, because students must discern how to differentiate between the meaning of words and the sounds of the letters (Rohde, 2015). Even though phonological awareness can be complicated for emerging learners, it is crucial because it contributes to literacy learning in subsequent grades (Holliman et al., 2016). All skills learned in the emergent learner stage are essential because each one fosters students' confidence, helps a student attain a robust literacy processing system filled with foundational skills, and allows the learner to gain some independence as a reader.

The second literacy development stage is early readers. Students in this literacy stage are approximately 7 years old and have obtained a collection of literacy processing strategies. Early readers understand how to employ strategies when reading to problem solve more complicated words and expand comprehension. Students still utilize visual clues to correlate pictures to the text, but at times the visual clues do not offer support for the dissimilarities in language patterns. Morris (2015) recommended that teachers present early readers with new challenging media that have extensive lengths, so students must integrate other sophisticated processing strategies. To sustain grade-level reading performance, early readers must use metacognition strategies such as predicting, vocabulary and summarizing while monitoring meaning (Conner et al., 2014). These sophisticated metacognition strategies aid in building in-depth literacy skills and understanding.

The third reading development phase is the transitional readers who are on average in grades 2 and 3. Morris (2015) delineated that literacy instruction should comprise a systematic phonics curriculum with sight words and vocabulary to promote comprehension skills. Transitional readers are proficient in pacing and word solving strategies, which allows the act of reading to be automatic. A combination of genres can be implemented into the curriculum because transitional readers can track more complicated storylines with several characters. Transitional readers understand how to consolidate diverse literacy processing systems to infer, synthesize, and transfer knowledge. The learning environment maintains a vital part of literacy acquisition. According to Snow and Matthews (2016), a constructive and productive learning environment encompasses explicit instruction, continuous valuable feedback, and verbal communications between teacher and students. Transitional readers require engagement in appropriate level texts and a welcoming learning environment to expand literacy learning.

The last stage in reading development is fluent readers, also recognized as the concrete operational learners. These literacy learners are the target group in this study. Piaget (1954) described literacy students who can read fluently as concrete operational learners because foundational skills have been solidified, and students can apply inductive reasoning to different facets of literacy. While children in this stage have difficulty with comprehending abstract or hypothetical concepts, they can relate mental

operations to concrete problems, objects, and events (Piaget, 1954). Fluent readers are less egocentric and can contemplate different perspectives.

Students in this stage of literacy development are transitioning from learning to read to reading to learn. To guarantee students are reading to learn; literacy practitioners should teach literacy competencies beyond phonics and word study (Thomason, Brown, & Ward, 2016). Instead, students need engagement an array of cognitive processes simultaneously, which can be in logical or illogical patterns. Conner et al. (2014) expounded that fluent readers manipulate complicated sounds, decipher complicated vocabulary words, make certain of sentence syntax, and implement advanced metacognitive reading strategies while reading a text of increased text length. Fluent readers can automatically utilize metacognition strategies to discern abstract language. Uccelli et al. (2015) explained concrete operational learners require explicit instruction regarding text organization structures, so advanced level reasoning can transpire. Fluent readers should have exposure to an extensive range of media opportunities such as magazines, websites, novels, and biographies.

Concrete operation learners need active engagement in discussions to refine understanding, employ schema, and construct real-world connections. Snow and Matthews (2016) postulated that higher learning outcomes emerge when students are afforded opportunities to be engaging participants in literacy discussions because vocabularies develop, grammar improves, and comprehension increases.

Second and Third Grade Teacher Training

Literacy learning is an evolving process that requires learners to use several neurons simultaneously to process and discern information (RRCNA, 2018; McNaughton, 2014). Because each learner has a unique literacy processing system, it can be an arduous task to educate students about the various literacy components (Lipp & Helfrich, 2016). Formerly enrolled Reading Recovery students received concentrated intervention services in first grade by specialized educators. These Reading Recovery educators have an in-depth comprehension of how to implement data and assessments to modify and personalize instruction, which will center on the students' literacy deficiencies. This training and expertise contribute to the once-struggling first-grade student's literacy achievement and attainment.

However, general education teachers do not possess the knowledge and responsiveness of how to instruct formerly enrolled Reading Recovery students. One reason for this is that these educators were not exposed to the learning experiences of the Reading Recovery training, curriculum, and methods (Connor et al., 2014). Serry and Oberklaid (2016) stated that general education teachers often lack an in-depth understanding of how to assist formerly enrolled Reading Recovery students with sustained literacy progress. Without extensive training, teachers are unable to fully comprehend that literacy learning is a multilayered processing system that involves many complicated facets and the processing systems varies depending on the learner (RRCNA,

2018; Clay, 2016). This lack of awareness, knowledge, and understanding of literacy teachers could cause the long-term sustainability of formerly enrolled Reading Recovery students to stifle. Literacy educators in Grades 2 and 3 can overcome these literacy challenges by being acutely well-informed in how students devise a literacy processing system, be prepared with a collection of instructional strategies and skills and be able to differentiate to each learner's literacy skill level and needs (Clay, 2016). Even when literacy teachers have prerequisite knowledge, there will still be students who will persistently struggle to read and write.

To guarantee all students learn the literacy skills that are required to sustain literacy progress, second and third-grade teachers must be continuous literacy learners. Foorman et al. (2016) explained teachers of literacy must be keenly knowledgeable and receive recurring training and support to be highly effective. There is an abundance of behaviors teachers can employ to foster continued learning and growing such as engaging in reflective conversations with other educators, participating in professional development activities, and having the willingness to change practices to improve student learning (Mandinach & Gummer, 2016; Walsh & Mann, 2015). Collaborative practices with other educators about the learning experiences transpiring daily in the literacy classroom are one of the most effective ways to improve student learning outcomes, and aid formerly enrolled Reading Recovery students to sustain necessary literacy skills (Klein, 2019; Lynch et al., 2016). There are many ways for teachers to engage in

reflective practices, including blogs, professional learning communities, podcasts, and book studies.

Even though research supports continuous education for teachers, it regularly does not ensue. The cost of recurrent training is one reason educators do not glean additional training. School funding is being allotted to safety measures such as resource officers and security cameras. Other matters withdrawing from teacher professional development funding are the state and national legislation allowing for school choice, which reduces educational finances at the state and federal levels (Zaniewski & Higgins, 2017; Walker, 2017; Thompson, 2016). Even though teachers need continuous education to remain current in literacy best practices, school districts are struggling to find the money to implement professional development for the teachers.

Formerly enrolled Reading Recovery students need to be taught specific reading metacognition strategies to comprise sustained literacy progress. Lipp and Helfrick (2016) and Fisher and Frey (2014) posited that a robust literacy curriculum incorporates metacognition reading strategies before, during, and after the reading lesson. Even though formerly enrolled Reading Recovery students were taught specific skills such as monitoring and prompting, research has shown that the students do not always continue using the before, during, and after metacognition strategies after completing the intervention program (Jesson & Limbrick, 2014).

One reason the metacognition strategies are not used is that there is a disconnection between the Reading Recovery intervention curriculum and the metacognition strategies taught in the general education classroom (D'Agostino et al., 2017; Jesson & Limbrick, 2014). General education teachers are not aware of what is being taught due to the lack of communication and training. Students are conscious that employing metacognition strategies in isolation is less demanding. However, when students are asked to apply multiple strategies simultaneously to problem-solve or think at a more meaningful level, it can become challenging, and often learning fractures (Rohde, 2015).

Metacognition strategies can be introduced, practiced, and reinforced before, during, and after reading. There are many diverse and broad metacognition comprehension strategies that literacy learners need for proficiency in reading and writing (Pratt & Urbanowski, 2015). It is fundamental when reading that the students integrate the metacognition strategies within the different genres to construct the literacy skills required to be successful when reading and writing independently (RRCNA, 2018). The objective for teachers is to employ metacognition strategies that invoke students' private literacy processing systems, which will educate students on how to self-monitor and how to discern meaning.

The reading metacognition strategies employed before a literacy activity plays a significant role in helping students construct foundational literacy skills. Metacognition

strategies before reading include predictions, schema, inferencing, and questioning. These before reading strategies enable the literacy teacher the opportunity to attain students' attention, prepare the students for learning, and draw upon the student's prior knowledge (Pratt & Urbanowski, 2015). Additional benefits of employing metacognition strategies are that the students learn how to build comprehension and self-monitoring skills before reading.

Teachers can utilize the text's organizational features, which can comprise the table of contents, glossary, titles, captions, and headings, to build students' before reading literacy processes. The organizational metacognition skills will transfer into helping students to make predictions, activate schema, devise inferences, and develop questions about the text (Muijselaar et al., 2017). Through recurring practice, application, and scaffolding of the organizational features, students discover how to delve into a deeper level of the text.

Questioning is one more pre-reading metacognition strategy where students learn how to create a list of questions that pertain to the topic and specific areas of curiosity. Fisher and Frey (2014) postulated that question and answer relationships are essential for reading comprehension because students learn to search, infer, and transfer information. Students can also use questioning to self-monitor and guide thinking, glean a purpose, and create mental visuals (Fisher & Frey, 2014). Questioning encourages the learner to participate in the learning experience actively and garner a more in-depth understanding.

Formerly enrolled Reading Recovery students were taught before reading metacognition strategies (RRCNA, 2018; Clay, 2016). However, researchers have alluded that many formerly enrolled Reading Recovery literacy learners do not rely on their prior knowledge and employ the learned literacy strategies (D'Agostino et al., 2017; Pratt & Urbanowski, 2015). Because of this, teachers need to explicitly understand "before reading" strategies so that specific instruction can be tailored to the student's literacy skill level (McNaughton, 2014). Higgins et al. (2015) confirmed that learned literacy interventions should be continued in the formerly enrolled Reading Recovery student's literacy plan to build competence and independence. Effective ways to teach before reading metacognition strategies are whole group, small group, and independent literacy groups. When before reading metacognition strategies are introduced, practiced, and embedded into the daily reading practice, students learn how to self-monitor and assemble literacy routines that will foster the growth of literacy skills.

The reading metacognition strategies used while students are reading are to help students understand 'how to think about the text' and 'what to think about the text.' During the reading lesson, students are engaged in different metacognition components, while implementing learned self-monitoring strategies. In first grade, formerly enrolled Reading Recovery students are taught explicitly an assortment of self-monitoring strategies about how to employ fix-it strategies to correct reading errors (RRCNA, 2018). Self-monitoring is a literacy strategy that allows the observer to determine if the student

is applying prior knowledge to engage and problem-solve the text, which is essential to inform instruction (Lipp & Helfrich, 2016). The students in subsequent grades need to continue using self-monitoring strategies to make meaning, decode, comprehend, and to problem solve (Pratt & Urbanowski, 2015). Self-monitoring strategies include prompts such as visualizing; listening to ensure the sentence makes sense, appropriate pausing, and rereading (RRCNA, 2018).

To be a successful reader in primary grades, it is crucial that a literacy learner self-monitor during reading. Meusen-Beekman, Brinke, and Boshuizen (2016) stated that during reading, a student needs to know there is a problem, be able to choose a solution, implement the choice, and then evaluate the effectiveness of the decision. Muijselaar et al. (2017) reported that self-monitoring is an essential literacy intervention skill that should be built upon over the early learning years because it affects education in all disciplinary areas as then learner progresses from the emergent reader stage to the fluent reader stage. Fisher and Frey (2014) postulated that during reading strategies help students to delve deeper into narrative and expository texts to continue to construct foundational literacy skills to derive meaning and understanding.

Snow et al. (2016) declared that when there is exposure to a plethora of inferential and literal text, creation of a diverse and accurate understanding occurs within the student. One strategy parents and educators can use to foster an in-depth literacy understanding during reading is to offer students opportunities to actively engage in an

array of texts in multiple disciplines. The cross-disciplinary approach will help students to summarize information, synthesize newly learned information, transfer knowledge, and activate prior experiences (Goldman et al., 2016).

Explicit vocabulary instruction should be taught as a “during reading” metacognition strategy. Researchers have shown that reading comprehension skills increase when a student is immersed in a vast vocabulary foundation (Fisher & Frey, 2014). Employing schema is one specific vocabulary skill needed to glean a deeper understanding of the unfamiliar vocabulary words. Students need comprehensive guidance on how to engage their prior knowledge to infer and comprehend the unknown word. Suk (2017) shared that students need exposure to vocabulary instruction, which includes high-frequency words using an extensive and intensive approach to achieve higher learning outcomes.

Context clues are another specific vocabulary skill that needs to be taught explicitly in the "during reading stage" to increase students’ depth of knowledge level. Snow et al. (2016) defined context clues are as unknown or unfamiliar words in a sentence or paragraph encapsulated by familiar words. To build a comprehensive literacy understanding of context clues, students need to utilize their self-monitoring strategies in a diverse amount of educational opportunities in all disciplines to work with context clues, which will foster vocabulary development. Fisher and Frey (2014) suggested that to cultivate a compilation of vocabulary words; students need devoted time to practice the

words in a context such as reading, writing, and speaking. Multiple interactions with vocabulary words will help to create solid neural passageways and connections, which will result in a more profound understanding.

Questioning is another metacognition strategy that should be taught as a "during reading strategy". Teachers can use questioning techniques to help students to facilitate literacy foundational skills in primary grades. Each student will need to learn how to formulate and ask questions during reading to derive meaning, combine other literacy skills and strategies to lengthen understanding (Doubet, Hockett, & Brighton, 2016). Literal questioning involves who, what, where, when, and why, which aids in fostering understanding of the text. Inferential questioning encompasses a depth of knowledge level. This type of questioning can be challenging to formerly enrolled Reading Recovery students because students must employ schema and strong foundational skills to think at this level (Higgins et al., 2015). The students must infer complex information from diverse sources to agree or contradict at a deeper level (Goldman et al., 2016). Even though it can often be challenging, questioning plays a pivotal role in making the text more meaningful to the learning experience.

Evidence has shown that after exiting the Reading Recovery intervention program, these students do not continue to use self-monitoring or other metacognition strategies during reading, which causes a student to regress or stall in reading development (Chapman & Tunmer, 2016; May et al., 2015). The goal of educators in

Grades 2 and 3 should be to assist these once formerly enrolled Reading Recovery students to continue to use these metacognition strategies to become proficient literacy learners (Pratt & Urbanowski, 2015). When this occurs, the student will continually integrate self-monitoring strategies during reading. Students will read the text for meaning, making predictions, inferring, and connecting.

Grades 2 and 3 students need to learn and apply specific metacognition skills following a reading activity or lesson to become independent literacy learners. The after reading metacognition skills are vital to connecting prior literacy knowledge with new literacy knowledge (Doubet, Hockett, & Brighton, 2016). Students can take the newly connected information, process it, and blend it with their lives to make meaning, to problem solve and grow in literacy, which will increase the level of text difficulty. The broad metacognition strategies include summarizing, analyzing, and synthesizing. Within these comprehensive strategies, there is an abundance of learning exercises that can be employed to ensure in-depth learning, achieving, to determine the importance and make connections at a more meaningful level. Gersteen et al. (2017) wrote that students need to learn how to apply knowledge after reading to differentiate and coordinate between characters, story details, and settings. Other ways teachers can check metacognition after reading includes sequencing activities, determining author's purpose, and retelling the story. After reading metacognition strategies are essential to utilize, to ensure learning has transpired.

Rasinski et al. (2017) explained that Lexile Levels are a universal reading measurement instrument that measures and tracks student literacy achievement, development, and growth. Lexile levels are available in fiction and non-fiction genres and parallel a student's reading level with suitable literacy texts (Holliman et al., 2016). The different Lexile Levels are established on quantitative measures of complexity, including word length, frequency, and sentence syntax. Students need exposure to books based on the appropriate Lexile Level to maintain the essential literacy foundation skills and to create the necessary higher-level literacy skills required for continued learning (Elias, 2014).

The Reading Recovery intervention program utilizes leveled readers to foster independent readers. The students in grades 2 and 3 transition from the Reading Recovery leveling system to the Lexile leveling system. Both reading systems incorporate texts that are comprised of easy, just right, and challenging texts and continue to build literacy skills through fluency, self-monitoring, and prompting. Moreover, these skills aid in building comprehension. When teachers integrate the different Lexile leveled books into the literacy curriculum, it allows the diverse selections of students' opportunities to build and transfer fluency, vocabulary, metacognition strategies and other literacy competencies to all areas of learning (Clay, 2016). Other benefits of using Lexile Levels into a robust literacy program, literacy learners of all abilities can continue

to sustain progress because texts and instruction are tailored to a student's interest and individual needs.

Many textbook companies offer prescription curriculums that teachers can utilize to support instruction. Researchers reported that some students do not learn with the prescribed curriculum (D'Agostino et al., 2017; Jesson & Limbrick, 2014; Serry et al., 2014). To ensure all students succeed, a literacy educator needs to incorporate a highly effective monitoring system. Formerly enrolled Reading Recovery students had an enormous amount of data collected when they were active in the reading intervention. Reading Recovery teachers used a triangulation of data, including diagnostic, formative, and summative assessments to track each student's progress (RRCNA, 2018; Peurach & Glazer, 2016).

Cook (2017) argued that for formerly enrolled Reading Recovery students to be successful there needed to be a long-term monitoring plan. Mandinach and Gummer (2016) postulated that the primary purpose of data is to inform and adjust instructional practices using valid and reliable information. The three types of assessments are needed to ensure the formerly enrolled Reading recovery students continue to grow and sustain literacy progress. The three types are data include diagnostic, formative, and summative.

One type of assessment is diagnostic, which is completed at the initial phase of a unit, program, or school year. Dubeck and Gove (2015) wrote that educators should use diagnostic assessments because they can play a crucial role in assessing skills that are

mandatory for literacy acquisition such as familiar word reading, oral reading fluency, listening comprehension, and vocabulary. The diagnostic assessments provide baseline data on an individual student or group of students. The RRCNA (2018) shared that learning to read is a varied experience and differs from individual to individual. Each person is equipped with a literacy processing system that is multi-faceted and unique, and the baseline data will help educators better understand the differing student needs. Diagnostic assessments can also be used for planning guidance, programming placement, ability grouping, inform curriculum needs, and intervention needed to support student learning.

Formative assessment is another type of assessment. Typically, formative assessments are completed at various and continuous points during the school year. The data provided from formative assessments, such as running records, antidotal records, sight word checks, and grade level checklists, provide the teacher with a comprehensive amount of information regarding the path that formerly enrolled Reading Recovery student is taking at attaining the necessary skills at the appropriate second and third grade levels (Doubet, Hockett, & Brighton, 2016). The formative assessments information gives teachers the feedback needed to determine gaps in learning and weak areas. Then, teachers can modify instruction, learning activities, and practices to improve student outcomes.

Afflerbach (2016) explained that teachers should integrate different kinds of formative assessments into the curriculum, so the information gleaned can be used to help students improve their literacy skills. Formative assessments can be completed by students, peers, and teachers. Then, learning goals can be written to help target weaker skills. Dixson and Worrell (2016) explained that there are two main types of formative assessments: impromptu and planned. Teachers who use impromptu formal assessments watch the student's body language, have group discussions, and hold question and answer sessions. Planned formative assessments include lower stakes results such as quizzes, exit tickets, and homework.

One type of formative assessment is running records, which are formal and informal written accounts of a student's oral reading behaviors recorded by trained literacy teachers (McNaughton, 2014). Formerly enrolled Reading Recovery students participated in daily running records to measure their reading growth, literacy needs, and fluency levels (Clay, 2016). Information from the running record can give the teacher insight into an emergent student's independent reading level, which is necessary to ensure a student is achieving at grade level (Lipp & Helfrich, 2016). The daily running records provided the Reading Recovery and the general education teacher an insightful lens of each child's reading achievement to which educational decisions can be based.

To ensure a high level of fidelity of progress monitoring, grade two and three educators should continue to assess early readers, such as formerly enrolled Reading

Recovery students, using weekly or bi-weekly running records (Harmey & Kabuto, 2018). Foorman et al. (2016) explained that student monitoring should continue even after an intervention to ensure student's progress is occurring. The information gleaned from the running record will help these educators make databased educational decisions including accuracy and appropriate Lexile Level, which will further sustain literacy progress.

There are many facets of a running record that provide clues to a student's reading achievement or deficiencies such as miscues, self-correction, and self-monitoring. Miscues are an analysis of errors in a student's reading, which could affect the meaning or structure of a text (Pratt & Urbanowski, 2015). During the reading of the continuous text, the teacher codes omissions, inserts, and substitutions. After the reading of an unfamiliar and challenging text, the teacher will calculate the number of miscues to gather a glimpse inside the student's literacy processing system. Harmey and Kabuto (2018) noted that miscues are essential to a student's reading development because a reader must implement schema or background experiences to build or expand literacy knowledge. When analyzing a running record, a universal decoding system is used to determine if a Lexile Level text is at the appropriate grade and reading level range.

Summative assessment is at the completed at the end of a learning experience and provides an understanding of how much a student has attained or knows about the curriculum. McNaughton (2014) added that because students have such diverse

development literacy processing systems, summative assessments play a crucial role in ensuring development and achievement of the necessary standards have been mastered. Summative assessments are cumulative over a period and typically are high stakes. Dixson and Worrell (2016) clarified that summative assessments are beneficial because the information gleaned can be used for promotion, retention, or placement in a program. Some examples of summative assessments include portfolios, projects, and state or national assessments.

Two challenges of data use are time and effort. It takes a vast amount of time and effort to assess each formerly enrolled Reading Recovery student. Since formative assessments such as running records and sight words are to be measured at an individual basis, the task to incorporate these formative assessments into the literacy curriculum and instruction can be daunting. Afflerbach (2016) reported that it takes a lot of devoted time and effort for teachers to administer assessments, interpret assessments, and implement the data into explicit lessons that will improve knowledge and skills. Due to all the other time constraints on teachers, it can become challenging for teachers to test at an individual level and several times per school year.

Another challenge of data use is teacher knowledge. To become an expert at data use, one must begin in the preservice years and continue throughout a teacher's career. Lynch et al. (2015) advocated that for teachers to become knowledgeable about how to interpret and use data, the teacher must be prepared to change teaching practices.

Mandinach and Gummer (2016) wrote that data examination could not be solitary practices but instead must be embedded as part of the literacy infrastructure. Walsh and Mann (2015) explained that reflection is a crucial component to data collection because it causes the teacher to expand their thinking of how students are developing as literacy learners. Over time, teachers should continue to improve their data knowledge and skills so that their expertise can develop in breadth and depth.

Literature Review Conclusion

Early literacy programs for formerly enrolled Reading Recovery students must encompass a robust literacy plan that includes teacher expertise, before, during, and after metacognition strategies, an assessment, and monitoring plan. Furthermore, literacy teachers require continual professional development opportunities. Continuing training is critical because teachers and schools are being held accountable for test scores, evidence-based practices, and implementing grade-level literacy standards. To meet and exceed accountability measures, teachers need to be abreast of the latest literacy trends, best practices, instruction, monitoring, and data collection methods.

It can be time-consuming to allow an extended amount of time and effort to data collection and using the data for instruction. However, it is necessary to ensure students' literacy deficits are acknowledged and addressed. When literacy teachers obtain recurring training, utilize data to inform teaching, and track student progress, then

teachers can make certain formerly enrolled Reading Recovery students continue to sustain literacy progress in subsequent grade levels.

Project Description

The design of the 3-day professional development training plan was based on the Reading Recovery model and a whole school model in Ireland. According to Messiou et al. (2016), the Reading Recovery model can be modified and utilized by general education classroom teachers to foster and support the literacy skills of struggling students. Fried (2016) wrote about the varying degrees of teacher knowledge and skills and believed that general education teachers do not always have the prerequisite skills to teach at-risk students' literacy. Therefore, the training project entails three days of professional development literacy training for educators in Grades 2 and 3.

The professional development training will help educators monitor and meet the individualized literacy needs of the formerly enrolled Reading Recovery students. The professional development training will occur over three days with aligned goals and specific learning outcomes. All documents will be presented using a PowerPoint presentation, and educators can download the materials onto any device during the presentation to help guide their learning. Moreover, the participants will have access to the presentation afterward so they can use it in the classroom and share with colleagues.

Many resources are needed to create productive professional development sessions. One resource is a designated space in the school that is large enough to support

the diverse learners' needs. The room will need to be equipped with tables or desks so that participants can have a placement for their supplies and technology devices. Technology supports such as a projector, extension cords, and projection screen are necessary for the professional development experience. Existing supports include the facility to hold the professional development training, additional personnel to aid the learners, and a technology coordinator to assist the presenter with the presentation.

The potential barriers to professional development training include childcare, educational vocabulary, and language differences. A potential solution to the childcare barrier would be to ask National honor society students or community volunteers to have a playgroup with the students while their parents attend the training. A potential solution to the vocabulary barrier and language differences is to have readable information with visual prompts. The presentation handouts can be translated before the training session. Follow-up sessions can be scheduled so caregivers can share what is working and ask questions or voice concerns that have transpired since the initial training session.

On the first day of training, educators will learn about the literacy processing theory and how students obtain literacy knowledge. Clay (1991) believed each student has diverse developmental processes, which cause literacy learning to occur in distinct combinations. RRCNA (2018) members understand that practice and theory are reciprocal processes. Therefore, teaching about the literacy processing model will help foster teacher understanding of how students learn literacy.

Additionally, Day 1 training will offer educators knowledge about the importance of diagnostic assessments and how to utilize the data to measure where each formerly enrolled Reading Recovery student is academically. It is necessary for educators to understand how to collect diagnostic data to establish a starting point, placement in a literacy group, identify problem and strength areas, and current text levels. Hoogland et al. (2016) explained that collecting data in the classroom is an essential component to maximize student learning and academic achievement.

Included in the training will be how to design a daily schedule to ensure all literacy components can be taught in a thirty-minute segment. A sample literacy schedule will be shared to help ensure formerly enrolled Reading Recovery students are building on the skills learned as first graders. Jesson and Limbrick (2014) expounded following the Reading Recovery format offers students the chance to remain on grade level, and the opportunity to problem-solve using skills learned previously. Another benefit of using a systematic process will provide students with a responsive learning environment. Literacy issues can be addressed immediately, and lessons can be tailored to student needs (McNaughton, 2016).

During one component of the daily schedule, students will read appropriate level texts based upon Lexile levels. In the Reading Recovery intervention program, the texts are leveled using a one through twenty leveling system. Progress through the levels is based on student scores from the daily running records. The location of this training is in

Indiana, and the state standards use the Lexile level text complexity system. Therefore, this training will focus on Lexile levels. The IDoE (2017) posited Lexile levels for each student should be based on cognitive functioning, reading skills, motivation, engagement, schema, and reading experiences. Educators will have exposure to different types of texts with varying Lexile levels so that each person can glean the vocabulary, structure, and other literacy difference between the levels.

During the daily literacy lesson schedule, students will have a brief period designated to word where students will receive instruction in areas like suffixes, prefixes, parts of speech and sight words. A list of Dolch sight words will be provided, so the teachers understand how to use and measure a student's knowledge of words in isolation. According to the Sightwords website (2019), these lists include 80% of words found in children's text. When students learn these necessary words, a student can read more fluently, and the words transfer to student writing, which is also a daily component of the literacy schedule.

Extensive time will be spent on the coding systems, interpreting and scoring running records. The time is necessary so that the educators learn how to record and calculate reading behaviors. During this time, educators will obtain a solid understanding of notating with enough time to practice and review. Peurach and Glazer (2016) explained that Running Records are a fundamental part of teaching because the data gained can be used during the subsequent lessons to support and challenge the literacy

learner. Meaning, structure, and visual errors are essential skills educators must know to guide student learning. During this workshop, educators will espouse the skills, expertise, and strategies needed to determine what type of error students are making and how to teach students to manage their errors for future reading success.

Day 2 professional development workshop will introduce how to assess each formerly enrolled Reading Recovery student on the formative assessment. The literacy data collected will help the educator to devise a supporting learning environment using clear goals and specific action steps needed to improve student learning and understanding (Hoogland, 2016). These goals and lessons will enable the student the opportunities needed to enhance knowledge based on specific educator feedback.

During the Day 2 workshop, educators will glean a deeper understanding of specific prompts, strategies, and cues used to promote comprehension, fluency, and vocabulary building. These literacy tools will help students to construct a vast network of reading processes that are needed to understand all types of literary genres. Connor et al. (2014) shared different metacognition tools students can employ from the emergent reading stage to the fluent reading stage that integrates thinking within the text, thinking beyond the text, and thinking about the text. These metacognition thinking strategies are necessary to build fluency, vocabulary, comprehension, and depths of knowledge to ensure mastery of the challenging literacy processes. Muijselaar et al. (2017) explained that as students accelerate in grades and text complexity, reading comprehension skills

are vital to ensure students can infer, synthesize, and evaluate, which is the depth of knowledge skills. Educators need specific training on how to integrate the depth of knowledge skill levels into the curriculum. A variety of metacognition strategies that are engaging and produce thought-provoking ideas are needed so students can build a robust infrastructure to comprehend at various levels. After the 3-day professional development training, educators will know the types of questions needed to cultivate a students' depth of knowledge using three metacognition and questioning prompts for before, during, and after reading.

The Day 3 professional development workshop will begin with educators developing an understanding of how to conduct and interpret the summative assessment. Educators need to cultivate an understanding that collecting data is a cyclic approach that provides meaning and explanation of how students are performing at different times of the school year (Mandinach & Gummer, 2016). The summative assessment is crucial so the educators can determine if the student's goals and objectives throughout the school year were attained. Professional educators will have the opportunity to devise lessons from the Running Records and incorporate all the information learned from the previous two days. Training participants will have time to share ideas with other educators, so an arsenal of ideas can be collected and taken back into the classroom.

An afternoon session will be a caregiver-professional development session, which will include ways families can help their child at home with literacy skills. Jung and

Zhang (2016) postulated that elementary students perform higher academically when caregivers are active participants in the education of the child. Because of this, it is paramount that elementary educators reach out to caregivers and offer training sessions on how to help the child outside the school domain. Caregivers will receive knowledge about the different stages of learning, metacognition skills needed to progress in literacy, and reading prompts to help expand awareness and thinking processes. Each caregiver will receive 3 metacognition bookmarks with questioning prompts for before, during, and after reading. After each daily training session, there will be a designated time allotted from educators and parents to ask questions, share growths, propose ideas, and to clarify understanding. The daily workshop summative session will offer a high level of engagement for participants.

Project Evaluation Plan

The project chosen for this study is a 3-day professional development plan. To stay abreast of the latest educational research, best practices, and ideas of literacy learning, educators should have professional development. Merchie, Tuytens, Devos, and Vanderlinde (2016) recommended that educators use a systematic and intentional focus on evaluating programs to determine their effectiveness. There is an array of avenues to obtain professional development including webinars, workshops, book studies, summer institutes, and seminars. This professional development plan will incorporate an evaluation to determine the effectiveness of the program and how the

program can be improved. The professional development plan's key stakeholders are the caregivers and general education teachers of second and third students. Also included in this training could be literacy specialists, curriculum directors, and literacy educators.

Formative assessments will be a part of the process evaluation. Professional Development Days 1 and 2 is when participants will share feedback and comments that are linked to the learning experiences. The formative assessments are open-ended statements where participants will write down ideas and concepts that resonated and ideas or concepts that need more information. These statements will be used by the trainer to clarify thoughts, modify instruction, or to improve learning outcomes.

The process evaluation's second component is the summative assessment. After the conclusion of the 3-day professional development training program, all training participates will complete a Professional growth rubric and return it to the facilitator. Researchers stated that presenters need to conduct summative assessments on lectures for accountability purposes, for improvement, and to determine the strengths and weakness of the program (Holliman et al., 2016; Slavin, 2016). The summative assessment will examine 5 critical areas of the professional development training sessions including the training topic, organization, subject knowledge, interaction, and assessment. The rating scales for the summative assessment consists of unsatisfactory, basic, and distinguished. The difference in the rating scales is the depth of the implementation.

The first category to be evaluated is the topic. The professional development participants will rate this category on the literacy topics that were delivered and the relevance of the presented material. The second category to be rated is about the organization of the professional development training sessions. Educators will determine if the literacy presentation follows a clear and logical direction. The third category to be rated is the knowledge level of the presenter. Participates will measure the knowledge level and determine how well the information is delivered. Other elements to consider in this area are the trainer's ability to answer participants' questions in a clear, concise manner. The next evaluation category is interaction and will measure the amount of active engagement in the learning process between the presenter and the audience members. The final summative category is the assessment area. Participants will rate this category on the presenter's ability to ask depth of knowledge and open-ended questions that will evoke a deeper understanding of the content.

A process evaluation that has built in formative and summative assessments will be implemented into the three-day professional development training. Formative assessments will give the presenter daily feedback to improve the lecture, materials, and ideas. The summative assessment will provide the presenter with a comprehensive evaluation of the learning experience. All components of the process evaluation will provide the presenter with the knowledge of how to improve the training.

Project Implications

This project study has implications for social change in my local school district. Currently, Reading Recovery is the only early intervention literacy program used in first grade. However, the standardized test scores show that by fourth grade many of the formerly enrolled Reading Recovery students had not sustained progress (IDoE, 2018). Perhaps one reason was that students are not adequately monitored after exiting the Reading Recovery program. My local school district can use this professional development training program and educate second and third-grade teachers about how to use the same language, prompts and strategies to ensure consistency and promote literacy skills.

Another implication for social change is a rise in standardized test scores. Since the program builds upon the Reading Recovery program which has supplied struggling students with the literacy infrastructure needed to be successful, students can continue to develop literacy skills that will serve them the rest of their lives. Research has shown the having strong literacy skills helps adults get higher wage jobs and are more productive in the community (Kuchle et al., 2015). The third implication for social change is that the training incorporates a half-day session for parents. One of the strongest bridges for literacy is to establish a home and school collaborative relationship. Educating parents about how to work with their child at home will enhance literacy skills and help students learn at a more accelerated pace. Researchers have pointed out that students perform at a

loftier level when caregivers have a level of engagement in school activities and lessons (Jung & Zhang, 2016). A training session will enable caregivers the tools needed to help young learners be successful in literacy.

Section 4: Reflections and Conclusions

Project Strengths and Limitations

Since I am one of the building administrators, one deliverable strength of this project study is that I have control over the scheduling and implementation of the professional development training project. I will use one of the back-to-school training days to launch the new professional development literacy training. Besides the initial professional development training days, other follow up training days will be scheduled during the school year to ensure long-term literacy sustainability, rigor, and fidelity. The additional training days are necessary to provide continuous and consistent opportunities for teachers to practice, build skills, and master more complex implementation strategies.

The second deliverable strength of this project study is that as an administrator, I can create a literacy steering committee to foster collaboration, revision, and full integration. As the school leader, I can disseminate guidance to the committee to set unified literacy implementation goals, create an ongoing conversation, and provide many training opportunities. The steering committee and I can work in tandem to deploy ideas and strategies that will promote effectiveness and a more in-depth learning experience for students and staff.

One deliverable limitation of the project is the lack of opportunity for all grade level teachers to participate. Since this professional development training is for educators in grades 2 and 3, it limits who can participate. Additionally, the literacy schedule and procedures must be followed consistently, which rigid routines may result in teachers having limited autonomy to create their literacy schedules and lessons. The rigorousness of the program could stifle teacher creativity and reduce teacher buy-in. Over time, the steering committee could address these limitations and possibly extend the literacy project to upper grades.

Recommendations for Alternative Approaches

The problem in this study is that there is inconclusive evidence regarding Reading Recovery's long-term effectiveness, which is important because the research site has low literacy standardized test scores. There is a lack of literacy leadership at the site of the study. One recommendation for an alternative deliverable approach is to retain a curriculum director or literacy specialist. The director or specialist would be responsible for devising professional development training sessions regarding curriculum alignment, scope and sequence, monitoring student achievement, and determining priority standards. Embedded into the professional development training would be specific topics such as lesson differentiation and activities, including literacy strategies and assessment. The second recommendation for an alternative deliverable approach is that the curriculum director or literacy specialist would collaborate with general education teachers in grades

2 and 3 about how to integrate Lexile levels into the adopted district curriculum. Each day, students need fluency, comprehension, modeling, and exposure to appropriate level texts.

Scholarship, Project Development, and Leadership

When I began this doctoral educational endeavor, I knew I wanted to succeed. However, I was not aware of the dedication it would take to accomplish the enormous feat. I learned many things about myself along this journey. One is my ability to persevere. I took on a leadership position during the final year of the capstone project. It made my doctoral journey more difficult due to the number of hours I had to commit to my new job.

Balance is another detail I learned from this endeavor. It has been challenging balancing family, work, and friends, which have been critical to my success. Another point I learned is that attempting new educational endeavors is challenging but rewarding. Through the iterative writing process, I have gained writing, vocabulary, and analysis skills. I am a more confident writer and researcher. The struggle was not easy, but through many hours of research and communication with my doctoral chair, I have almost reached my goal. From all of this, I learned that to be successful, support from others is necessary, balance in life is critical, and one must never give up.

Reflection on Importance of the Work

This quantitative project study is important due to the results it offers for one school district. Due to budget cuts, teacher attrition, and the loss of programs, it is essential that all programs yield maximum positive results. If not, the district can assess programs and determine if they have validity, changes should occur, or removal is necessary so a new reading program can be implemented to help struggling readers. District school members and administrators will receive a copy of the quantitative results of this study. From this, a conversation can begin among all stakeholders regarding how to improve the program or if it should be discontinued.

Another reason this quantitative project study is important is that it offers a clear and concise professional development plan for second and third grade educators. It is rooted in best practices, state standards, and literacy research. Cochran-Smith et al. (2015) concluded there is a disconnection between most teacher preparation programs and schools. Because of this disengagement, primary teachers do not have the necessary literacy skills to teach once-struggling students how to read. Reading Recovery teachers receive extensive training before receiving certification, and educators undergo continual professional development regarding how young students attain literacy skills (RRCNA, 2018). However, general education teachers do not receive this vast amount of training and therefore are not experts regarding how literacy skills should be modeled, scaffolded, and conveyed to young learners. The professional development training will foster

teachers' understanding about how struggling or at-risk students attain literacy skills and how to adapt the curriculum to meet their diverse needs in terms of literacy.

Impact on Social Change, Implications and Directions for Future Research

When the data was analyzed, the results showed that fourth grade nonenrolled Reading Recovery students outperformed the formerly enrolled students on the 2017 ISTEP+ standardized assessment. These data results can lead to a social discourse among parents, teachers, and administrators, which will facilitate social change. The conversations among the diverse stakeholders will allow school administrators to examine if the data is consistent with the school and stakeholder perspectives regarding first-grade literacy intervention. Stakeholders could continue a conversation regarding best practices and reading strategies for literacy learning across grade levels, which will promote a social change in teaching methods at home and school.

A second way the results will lead to social change is by using data to remove gaps and deficiencies in the second and third grade literacy program at the research study site. Teachers who attend the training will gain knowledge about how to apply literacy practices, strategies, and tools. After they are more knowledgeable about how to provide differentiated instruction to struggling literacy learners, change can occur. Social change is linked to the project study and the literacy processing theory. Literacy is a cyclic process where students learn in diverse ways and at different levels.

Emergent readers learn the foundational skills of literacy and continue to expand their knowledge with skills that are necessary for lifelong literacy learning, which impacts social change. There are empirical implications with social change that affects students' literacy processing and development. During the professional development training, second and third-grade teachers will have exposure to an array of tools, skills, and strategies that promote positive literacy behaviors and will support learning and change. Teachers can use this information from this project when devising the curriculum, investing in textbooks and trade books, and when choosing professional development options.

Directions for Future Practice

There are several directions a researcher can take for practice relating to sustaining literacy skills and strategies after first grade. The first recommendation for practice is for the school research site and its stakeholders to examine the study results and determine curriculum and programming areas of strengths, weaknesses, and gaps. During the investigation, the stakeholders could decide if the first-grade intervention is worth the high cost to implement.

A second recommendation for practice is to implement the project created in this study into the curriculum. The literacy project could be used as a connector from the first grade Reading Recovery intervention through second and third grades. After implementation, stakeholders can make modifications that will enhance the literacy

program at their school, which will ensure sustained literacy after the Reading Recovery intervention program. A third recommendation for practice is for teachers to align this created project with the state literacy priority standards with materials and adopted literacy materials. Part of examining the curriculum is looking at the vertical alignment between grade levels, which allows these teachers collaboration opportunities. During these collective collaboration teachers can devise a list of the literacy skills students need to ensure literacy sustainability.

Conclusion

Throughout this capstone, a thorough investigation was completed that included the benefits and implications of the Reading Recovery program on first-grade students' literacy learning. The outcome of the study was that formerly enrolled Reading Recovery students did not always sustain literacy skills after exiting the literacy intervention, despite an array of research that shows that Reading Recovery can be a powerful first-grade intervention. The question becomes what happens after students exit the tailored individualized program that limits students in this study from sustaining literacy progress?

A discussion needs to transpire among an array of stakeholders to determine why sustainability does not always occur. Perhaps it is a program with a lack of teacher preparedness, fidelity, monitoring, or a curriculum. For students to sustain literacy skills, a robust literacy program must be implemented with metacognition strategies. I dream

that the created project study will be used at my school. The designed project study will support sustained literacy growth after struggling readers exit the first-grade literacy intervention program, which will make stronger readers and writers across the grade levels.

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Appendix A: Final Study

What Happens After Reading Recovery?

Continuing to Support Formerly Enrolled Reading Recovery Students

Second and Third Grade Professional Development

Stephany Carr

EdD Candidate at Walden University

January 2019

Professional Development Plan Overview

Target Audiences:

- Second and Third Grade Educators
- Caregivers of Second and Third Grade Students

Professional Development Plan Purpose:

- The purpose of this three-day professional development workshop, for second and third-grade teachers and families, is to garner the skills needed to help formerly enrolled Reading Recovery students to continue to have sustained growth in literacy.

Professional Development Plan Goals:

- After a three-day professional development opportunity, educators will be able to conduct a diagnostic, a formative, and a summative assessment using three specific grade-level checklists.
- After a three-day professional development opportunity, educators will be able to assign Lexile levels to students, analyze Running Records of students and use the results to implement specific self-monitoring strategies, literacy prompts, and comprehension questions based on Reading Recovery techniques.
- After a half-day instructional opportunity, parents/guardians of formerly enrolled Reading Recovery students will know how to use self-monitoring strategies, and literacy prompts to help the student in the home setting.

Professional Development Plan Learning Objectives:

- Second and third grade educators will be able to perform an assessment using the grade level appropriate checklist, perform and analyze a running record, and use the results to inform teaching and learning.
- Second and third grade educators will be able to determine an appropriate Lexile level, apply specific literacy self-monitoring prompts and strategies, and understand the difference DOK Depth of Knowledge questions.
- Parents/Guardians will understand the purpose of a "daily book baggy" and how to conduct a guided reading lesson at home.

Professional Development Plan Anticipated Impact of Improvement of Formerly Enrolled Reading Recovery Students:

- Targeted learning group will be able to continue to apply Reading Recovery strategies and prompts to their second and third-grade literacy lessons and will be monitored three times per school year to ensure sustained progress occurs.

Professional Development Plan Evaluation Plan for the Three-Day Conference:

- After the three-day workshop, participates will complete a Professional Development Growth Rubric. The workshop facilitator will use the results of the rubric to inform practice and determine the impact of the workshop.

Professional Development Plan Handout Resources for Second and Third Grade Educators to be Successful:

- Three Types of Grade Level Checklists: Diagnostic, Formative, and Summative
- Daily Thirty-Minute Small Group Literacy Lesson Schedule
- Lexile Levels
- Dolch Sight Words Grades 1 -3
- Reading Recovery Coding Systems
- Reading Recovery Calculations
- Analyze the Errors: Meaning, Structure, or Visual Prompts
- Metacognition Self-Monitoring Strategies Bookmarks: Before, During, and After Reading
- List of DOK Depth of Knowledge Questions

Professional Development Plan Handout Resources for Parents to Be Successful:

- Self-Monitoring Prompts Bookmarks: Before, During, and After Reading
- Metacognition Strategies Bookmark: Before, During, and After Reading
- List of DOK Depth of Knowledge Questions

Professional Development Plan Budget:

- The proposed Literacy Professional Development Plan will be implemented at the elementary school that this study took place, so there will not be a fee associated with the training.

Professional Development Timeline

Training Day One:

9:00 – 9:15 – Literacy Processing Theory

9:15 – 9:30 – Break

9:30 – 10:30 – Diagnostic Assessments for Second and Third Grade

10:30 -10:40 - Break

10:40 -11:00 - Daily Thirty-Minute Small Group Literacy Lesson Schedule

11:00 – 12:00 – Lexile Levels and Dolch Sight Words

12:00 – 1:00 – Lunch

1:00 – 1:20 – Coding System for Running Records

1:20 – 1:40 – How to Perform a Running Record

1:40 – 2:00 – Practice Taking a Running Record

2:00 – 2:10 – Participant Questions

2:10 – 2:25 – Break

2:25 – 3:00 – How to Interpret/Score a Running Record

3:00 – 3:20 - Practice Interpreting/Scoring Running Records

3:20 – 3:30 – What Are Meaning. Structure, & Visual Errors?

3:30 – 3:50 – Running Record Errors: Meaning, Structure, or Visual Prompts

3:50 – Participant Glows / Grows

Training Day Two:

9:00 – 10:15 – Formative Assessments for Second and Third Grade

10:15 – 10:30 – Break

10:30 – 12:00 – Metacognition Before and During Reading Self-Monitoring Prompts Bookmarks

12:00 – 1:00 – Lunch

1:00 – 1:20 – Review of Self-Monitoring and Metacognition Strategies - Padlet

1:20 – 1:40 – Practice Using Self-Monitoring Prompts and Metacognition Strategies

1:40 – 2:00 – Metacognition After Reading -- DOK Depth of Knowledge Bookmark

2:00 – 2:10 – Participant Questions

2:10 – 2:25 – Break

2:25 – 3:00 – Practice Implementing DOK Depths of Knowledge

3:00 – 3:20 – Review Interpreting/Scoring a Running Record

3:20 – 3:30 – Questions, Thoughts

3:30 – 3:50 – Review Interpreting/Scoring a Running Record

3:50 – Participant Glows / Grows

Training Day Three:

9:00 – 10:15 – Summative Assessments for Second and Third Grade

10:15 – 10:30 – Break

10:30 – 11:30 – Devise Lesson Ideas based on Running Records

11:30 – 12:00 – Educational Share Fair

12:00 – 1:00 – Lunch

1:00 – 1:20 – Introduce Parents to Literacy Processing Theory and the Different Stages of Learning

1:20 – 1:40 – Metacognition Self-Monitoring Before and After Reading Prompts Bookmarks

1:40 – 2:00 – Parents Practice Using Self-Monitoring Prompts Bookmark

2:00 – 2:10 – Participant Questions

2:10 – 2:25 – Break

2:25 – 3:00 – Metacognition After Reading -- DOK Depth of Knowledge Bookmark

3:00 – 3:20 – Parents Practice DOK Depth of Knowledge Questioning Levels

3:20 – 3:30 – Participant Questions or Thoughts

This Photo by Unknown Author

Beginning of the Year Diagnostic Checklist for Second Graders

Current Lexile Level (Recommended 420 or above)	Current Level: _____ Mastered / Not Mastered
Read grade level text smoothly, accurately, and with expression	Mastered / Not Mastered
Identify characters, setting, problem, solution	Mastered / Not Mastered
Identify rhyming words, plurals, compound words, and beginning, middle, and end sounds	Mastered / Not Mastered
Differentiate between short and long vowels	Mastered / Not Mastered
Word Recognition – First Grade Sight Words	Mastered / Not Mastered
Writing sentence with upper- and lower-case letters and spaces between letters and words	Mastered / Not Mastered
Write a complete sentence about the story	Mastered / Not Mastered

Middle of the Year Formative Checklist for Second Graders

Current Lexile Level (Recommended 530 or above)	Current Level: _____ Mastered / Not Mastered
Read grade level text smoothly, accurately, and with expression	Mastered / Not Mastered
Write a logical connected reading response paragraph – topic sentence, sentence details, and a concluding sentence	Mastered / Not Mastered
Apply vocabulary when responding to literature and in writing with teacher supports	Mastered / Not Mastered
Identify a Main Idea	Mastered / Not Mastered
Make Logical Inferences	Mastered / Not Mastered
Describe characters (feelings, traits, actions, thoughts)	Mastered / Not Mastered
Make connections (text-to-self, text-to-text, text-to-world)	Mastered / Not Mastered
Retell/Summarize a text with key details	Mastered / Not Mastered
Word Recognition – ½ Second Grade Sight Words	Mastered / Not Mastered
Identify and write root words, prefixes, and contractions	Mastered / Not Mastered

End of the Year Summative Checklist for Second Graders

Current Lexile Level (Recommended 650 or above)	Current Level: _____ Mastered / Not Mastered
Read grade level text smoothly, accurately, and with expression	Mastered / Not Mastered
Comprehend Literary text Main Idea or Theme	Mastered / Not Mastered
Comprehend Nonfiction Texts Main Idea	Mastered / Not Mastered
Identify how characters respond and impact the plot	Mastered / Not Mastered
Explain connections between individuals, events, settings, and ideas	Mastered / Not Mastered
Make Logical Inferences with specific evidence/details to support	Mastered / Not Mastered
Write in logically connected sentences to form a reading response paragraph – topic sentence, supporting details, and concluding sentence	Mastered / Not Mastered
Revise and Editing reading response writing	Mastered / Not Mastered
Apply vocabulary when responding to literature and in writing	Mastered / Not Mastered
Word Recognition – All Second Grade Sight Words	Mastered / Not Mastered

Beginning of the Year Diagnostic Checklist for Third Graders

Current Lexile Level (Recommended 520 or above)	Current Level: _____ Mastered / Not Mastered
Read grade level text smoothly, accurately, and with expression	Mastered / Not Mastered
Comprehend Literary text Main Idea or Theme	Mastered / Not Mastered
Comprehend Nonfiction Texts Main Idea	Mastered / Not Mastered
Explain connections between individuals, events, settings, and ideas	Mastered / Not Mastered
Identify how characters respond and impact the plot	Mastered / Not Mastered
Make Logical Inferences with specific evidence/details to support	Mastered / Not Mastered
Write in logically connected sentences to form a reading response paragraph – topic sentence, supporting details, and concluding sentence	Mastered / Not Mastered
Revise and Editing reading response writing	Mastered / Not Mastered
Word Recognition – All Second Grade Sight Words	Mastered / Not Mastered
Apply vocabulary when responding to literature and in writing	Mastered / Not Mastered

Middle of the Year Formative Checklist for Third Graders

Current Lexile Level (Recommended 700 or above)	Current Level: _____ Mastered / Not Mastered
Read grade level text smoothly, accurately, and with expression	Mastered / Not Mastered
Make connections (text-to-self, text-to-text, text-to-world)	Mastered / Not Mastered
Apply vocabulary when responding to literature and in writing	Mastered / Not Mastered
Identify a Main Idea	Mastered / Not Mastered
Use Context Clues to determine meanings of literal, vocabulary, and figurative words	Mastered / Not Mastered
Make Logical Inferences	Mastered / Not Mastered
Describe characters (feelings, traits, actions, thoughts, viewpoints)	Mastered / Not Mastered
Retell/Summarize a text with key details	Mastered / Not Mastered
Word Recognition – ½ Third Grade Sight Words	Mastered / Not Mastered
Write in logically connected sentences to form a reading response paragraphs – topic sentence, supporting details, and concluding sentence	Mastered / Not Mastered

End of the Year Summative Checklist for Third Graders

Current Lexile Level (Recommend an 820 or above)	Current Level: _____ Mastered / Not Mastered
Read grade level text smoothly, accurately, and with expression	Mastered / Not Mastered
Analyze multiple accounts/viewpoints of the same event or topic	Mastered / Not Mastered
Describe how the parts and sections of the text fit together	Mastered / Not Mastered
Identify how characters respond and impact the plot	Mastered / Not Mastered
Make Logical Inferences with specific evidence/details to support	Mastered / Not Mastered
Explain connections between individuals, events, settings, and ideas	Mastered / Not Mastered
Apply vocabulary when responding to literature and in writing	Mastered / Not Mastered

Word Recognition – All Third Grade Sight Words	Mastered / Not Mastered
Write in logically connected sentences to form a reading response paragraph – topic sentence, supporting details, and concluding sentence	Mastered / Not Mastered

Daily Thirty-Minute Small Group Literacy Lesson Schedule

Monday – Thursday

- ✓ Step One: Familiar Read
- ✓ Step Two: Word Work
- ✓ Step Three: Writing
- ✓ Step Four: New Read
- ✓ Step Five: Select a Take-Home Book

Friday

- ✓ Step One: Familiar Read
- ✓ Step Two: Running Records
- ✓ Step Three: Word Work
- ✓ Step Four: Writing
- ✓ Step Five: Select a Take-Home Book

First Through Fourth Grade Lexile Levels

	Lexile Levels
Grade 1	190L to 530L
Grade 2	420L to 650L
Grade 3	520L to 820L
Grade 4	740L to 940 L

First Grade Dolch Sight Words

again	after	an
any	ask	by
could	every	fly
from	give	going
had	has	her
him	his	how
just	know	let
live	may	of
open	overtake	put
round	some	stop
take	thank	them
then	think	walk
were	when	

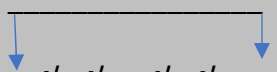
Second Grade Dolch Sight Words

always	around	because
been	before	best
both	buy	call
cold	does	don't
fast	first	five
found	gave	goes
green	Its	made
many	off	or
pull	read	right
sing	sit	sleep
tell	their	these
those	upon	us
use	very	wash
which	why	wish
work	would	write
your		

Third Grade Dolch Sight Words

about	better	Bring
carry	clean	cut
done	draw	Drink
eight	fall	far
full	got	grow
hold	hot	Hurt
If	keep	Kind
laugh	light	long
much	myself	never
only	own	Pick
seven	shall	show
six	small	start
ten	today	together
try	warm	

Running Record Chart

Student Reading Behavior	**Notation**	**Error**	**Example**
Correct Response	Word read correctly	No Error	√ √ √ √ √ The child has a cold.
Omission	Place a dash above the word that was omitted	1 Error	√ √ √ _ √ The child has a cold.
Insertion	Use a caret to insert the added word	1 Error	√ tiny √ √ √ √ The ^ child has a cold.
Repetition	Write 'R" after the repeated word/phrase. Draw an arrow back to the beginning of the repetition.	No Error	 √ √ √ √ The child has a R cold.

Self-Correction	Write 'SC' after the corrected word	No Error	√ √ had/SC √ √ The child has a cold.
Substitution	Write the spoken word above the corrected word.	1 Error	√ kid √ √ √ The child has a cold.
Attempt	Write each attempt above the word in the text	No Error if Result is Correct	√ /ch/√ √ √ √ The child has a cold.
Told	Write 'T' above the word.	1 Error	√ √ √ √ T The child has a cold.
Appeal	Write 'A' above the appealed word.	1 Error	√ √ √ √ A The child has a cold.

Running Record Calculations

Self-Correction Rate Formula:

Number of errors + Number of SC ÷ Number of SC = **Self-Correction Rate**

Running Record Error Formula:

Number of words correct ÷ Number of total words = **Accuracy Rate**

Accuracy Rates:

100% – 95% = Easy = Independent reading –

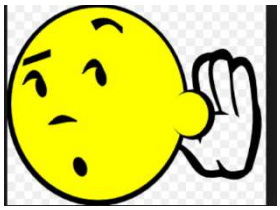
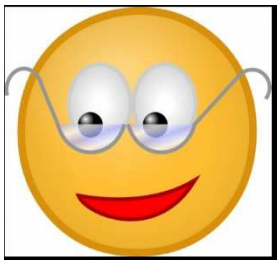
Text level is appropriate, and student can move up a text level

94% – 90% = Instructional = Guided reading – text level is appropriate

Drop down one level if student is reading independently

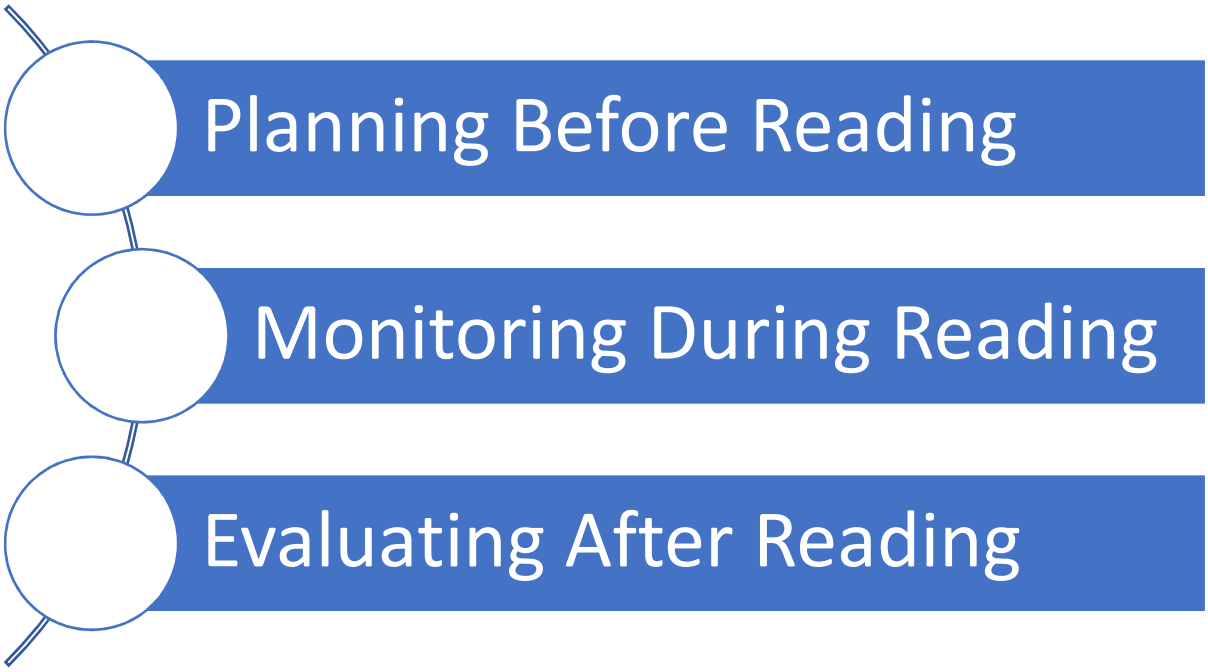
89% – Below = Hard = Shared Reading and Teacher Read Aloud

Analyze the Errors: Meaning, Structure, or Visual Prompts

Meaning 	Does it make sense? Use what you know to help you. Can you use the picture to help you? Think about the story. What would the character say?
Structure 	Does it sound right? Let's reread. What would it sound like if we were talking? Would we say it that way?
Visual 	What does it look like? Do I see any words that I know? Do the letters and words match? Can you start with the first part of the word? Does it look like a word you know? Do you know a word that ends that way? How would you write it? Can you look at the beginning, middle, or end?

Metacognition Strategies

Metacognition is teaching students to “think about their thinking”.



Metacognition Before Reading Self-Monitoring Prompts Bookmark

Make Predictions Before Reading	➢ Let's take a picture walk. ➢ What do you notice about…? ➢ What do you predict the book will be about? ➢ What does the title mean? ➢ Based upon text features, title, and organization of text
Activate Schema Before Reading	➢ Think about what you know about the topic and the scanned information.
Make Connections Before Reading	➢ Based on the title, have you read another text like this? ➢ What is the genre of this story? How do you know? ➢ Have you read another book with this same genre?
Ask Questions Before Reading	➢ Make a list of questions you have from the preview of the text. ➢ What are you wondering? ➢ What would you like to know more about after previewing the book?

Metacognition <u>During Reading</u> Self-Monitoring Prompts Bookmark

Monitoring During the Reading	➢ Reread the sentence with your finger. ➢ Check the beginning, middle, and end of the word. ➢ Frame the word. ➢ Do you know a word that looks like this? ➢ Find a part you know. ➢ What else can you try? ➢ How can you figure it out? ➢ Look at the picture. Does it fit with what you just read? ➢ Think about what makes sense. ➢ Go back to the beginning of the sentence. Try again. ➢ Do I understand all the words on the page? ➢ What reading strategies did you use to help you understand? ➢ Do I understand what I just read?
Make Predictions During the Reading	➢ Make predications as you read. ➢ Think about what you know about the topic and the information you read on the page ➢ What makes you think that? ➢ What challenges do you think the characters might face? ➢ Think about the title, pictures, and setting and predict what the story/book will be about? ➢ How do you think the story might end? Why do you think that?
Make Connections During Reading	➢ Is the character like you? ➢ Can you think of another story like this one? ➢ Can you relate your life to this story? ➢ Can you connect new information to prior knowledge? ➢ Are you like the character? Why or why not?
Make Inferences During Reading	➢ Using context clues, pictures, text and text features ➢ What is the lesson or message from the story? ➢ Why did the character act like she/he did? ➢ Why was the setting chosen? ➢ How did the character change in the story?

	➢ What was the mood/feelings of the main character? ➢ What lessons did you learn in the story that can help you in your real life?
Ask Questions During Reading	➢ Do I have any questions? ➢ What part of the story confused you? ➢ Were there parts of the story you didn't understand? ➢ What are you still wondering?

Metacognition <u>After Reading</u> -- DOK Depth of Knowledge Bookmark

Share Knowledge After Reading	➢ State the characters, setting, problem, and solution. ➢ Tell me about … ➢ What did the author want to tell us? ➢ Retell the story. ➢ What questions do you have? ➢ List the story events in order ➢ Describe the main character
Check Comprehension After Reading	➢ Who are they main and secondary characters? ➢ Where and when does the story take place? How do you know? ➢ How does the story begin and end? ➢ What is the problem in this story? ➢ How is the problem resolved? ➢ Who is telling the story?
Apply Knowledge After Reading	➢ How would you differentiate between the characters? ➢ What questions would you like to ask the characters?
Analyze the Information About Reading	➢ How is the problem connected to the setting? ➢ Why are the characters important to the story? ➢ Could the characters exist in real life?
Synthesize the Information After Reading	➢ What would happen if the setting was changed? ➢ Design a different character that could fit in the story. ➢ Summarize the beginning, the middle, and end of the story. ➢ What is the main idea/gist of the story? ➢ What were the most important parts of the story? ➢ What was the turning point of the story?

	➢ What do you think the author wants you to know after reading?
Make Evaluations After Reading	➢ Did you like the book or not? Why? ➢ Evaluate the characters in the story. Who was most important? ➢ Rank the characters in order of importance. ➢ Design a new setting.

Stages of Reading

Stage One: Emergent Readers	Preschool – Kindergarten Use visual cues to match words	Learning reading skills: Alphabet, oral sounds, spelling, & fluency	Learning to communicate	Learning how written and oral language works
Stage Two: Early Readers	First and Second Graders	Longer texts with less pictures	Monitoring meaning using meta-cognition strategies: recall and predicting	Includes sight words & vocabulary
Stage Three: Transitional Readers	Second and Third Grades	Environment plays a crucial role in literacy acquisition	Appropriate leveled text	Meta-cognition strategies: inferring,

				synthesizing, transferring
Stage Four: Fluent Readers	Fourth Graders and Older	Moving from 'Reading to learning' to 'Learning to read'	Wide range of media: novels, magazines, biography, news	Can see multiple perspectives

Professional Development Growth Rubric

	Unsatisfactory	Basic	Distinguished
Topic	The professional development topic does not have relevance to second and third grade teachers who educate formerly enrolled RR students.	The professional development topic has some relevance to second and third grade teachers who educate formerly enrolled RR students.	The professional development topic is very relevant to second and third grade teachers who educate formerly enrolled RR students.
Organization	The second and third grade teaches cannot follow the presentation because it does not follow a clear sequence.	The second and third grade teachers can follow the presentation because it follows a clear, logical sequence,	The second and third grade teachers can follow the presentation because it follows a clear, interesting, and logical sequence.
Subject Knowledge	The presenter has limited knowledge on the subject and cannot answer questions regarding the topic.	The presenter has knowledge about the subject and can answer most questions.	The presenter has knowledge about the subject and can answer all questions in detail with examples.

Interaction	The presenter lectures the entire time and does not involve the audience.	The presenter lectures and involves the audience to develop a more meaningful understanding.	The presenter lectures and actively involves the audience in the learning process.
Assessment	Questions are only asked at the end of the professional development session.	Questions are asked throughout the professional development session for a higher-level thinking,	Questions are asked throughout the professional development session for critical thinking and mastery of the content.

Appendix B: Data Use Agreement

This Data Use Agreement ("Agreement"), effective as of July 27, 2018, is entered by and between Stephany R. Carr ("Data Recipient") and [ ] Community Schools ("Data Provider"). The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set ("LDS") for use in research in accord with the HIPAA and FERPA Regulations.

1. Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the "HIPAA Regulations" codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.

2. Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient an LDS in accord with any applicable HIPAA or FERPA Regulations

Data Fields in the LDS. No direct identifiers such as names may be included in the Limited Data Set (LDS). The researcher will also not name the organization in the doctoral project report that is published in Proquest. In preparing the LDS, Data Provider or designee shall include the data fields specified as follows, which are the minimum necessary to accomplish the research:

- [ ] Community Schools will release the archived 2017 Fourth-Grade Student Standardized ISTEP+ Language Arts Assessment composite data to the researcher listed above.

- The school corporation will remove all student names, corporation name, and school name, and any other identifiable information from the archived 2017 Fourth-Grade Student Standardized ISTEP+ Language Arts Assessment data before submitting to the researcher.

- The school corporation will highlight the 2017 Fourth-Grade Student Standardized ISTEP+ Language Arts Assessment composite score only if the

student participated in Reading Recovery during his/her first-grade academic school year. This highlighted information will distinguish between former Reading Recovery students and Non-Reading Recovery students during the 2013-2014 academic year.

3. Responsibilities of Data Recipient. Data Recipient agrees to:

    a. Use or disclose the LDS only as permitted by this Agreement or as required by law;

    b. Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

    c. Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

    d. Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

    e. Not use the information in the LDS to identify or contact the individuals who are data subjects.

4. Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS for its research activities only.

5. Term and Termination.

    a. Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

    b. Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

    c. Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

d. For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

e. Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

6. Miscellaneous.

a. Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

b. Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

c. No Third-Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

d. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

e. Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

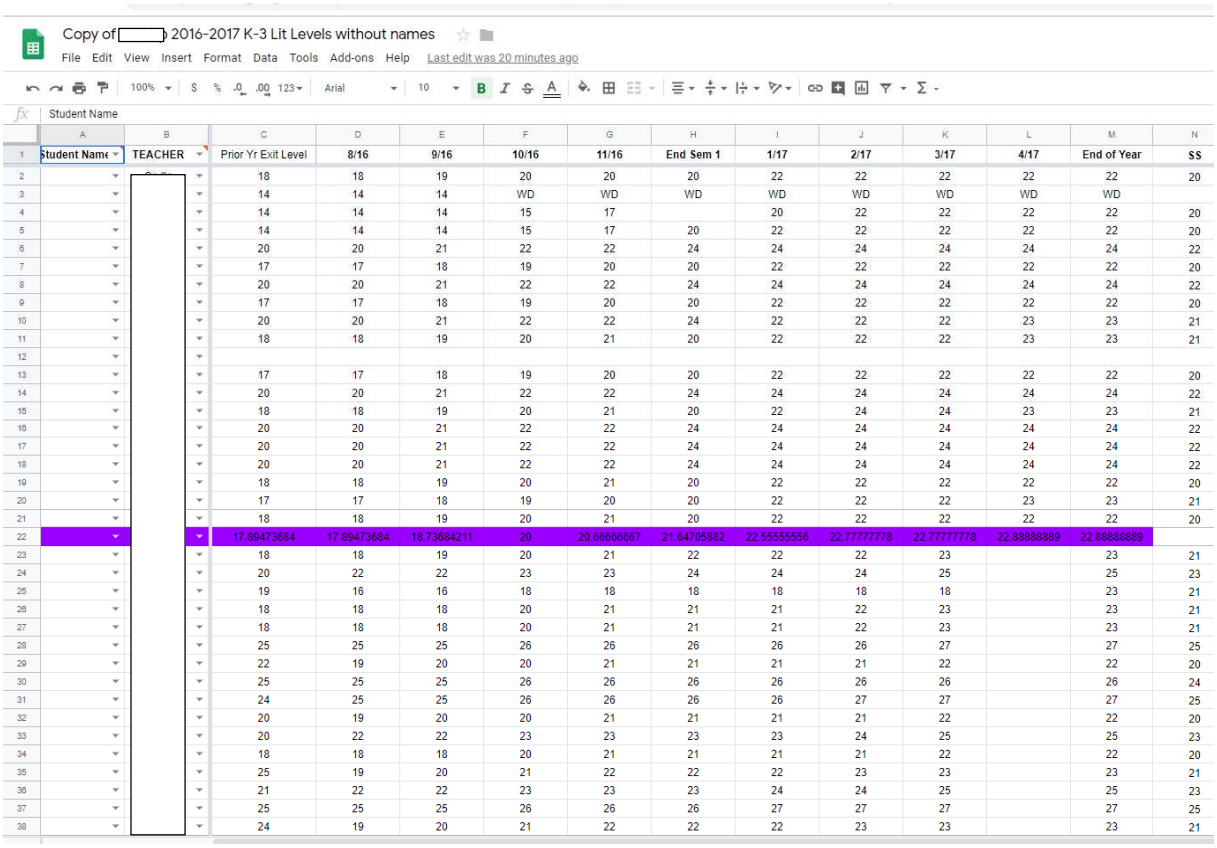
IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER	DATA RECIPIENT
Signed:	Stephany R Carr
Print Name:	Print Name: Stephany Carr
Print Title:	Print Title: EdD Student Researcher

Appendix C: Early Literacy Interventions Comparison Table

	Reading Recovery	**Success for All**	**Leveled Literacy Intervention**	**Fast ForWord**
Alphabetics	Positive Evidence +21 points	Positive Evidence +9 points	No Discernable Effects +5 points	Mixed Evidence 0 points
Comprehension	Potentially Positive +14 points	Mixed Effects +0 points		Mixed Evidence 0 points
Reading Achievement	Positive Evidence +27 points	Mixed Effects +0 points	Positive Effects +11 points	
Fluency	Potentially Positive +46 points	Potentially Positive +12 points	Potentially Positive +11 points	Zero Rating 0 points

Appendix D: Third Grade 2016-2017 Literacy Levels



Copy of [redacted] 2016-2017 K-3 Lit Levels without names

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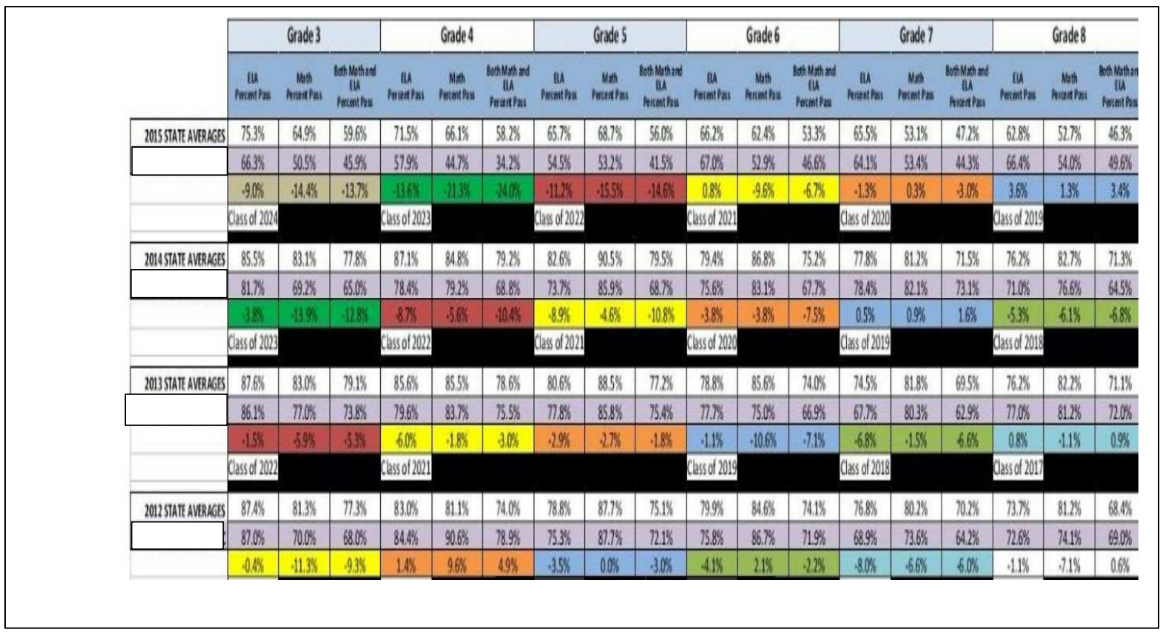
Student Name

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Student Name	TEACHER	Prior Yr Exit Level	8/16	9/16	10/16	11/16	End Sem 1	1/17	2/17	3/17	4/17	End of Year	SS
2			18	18	19	20	20	20	22	22	22	22	22	20
3			14	14	14	WD	WD	WD	WD	WD	WD	WD	WD	
4			14	14	14	15	17		20	22	22	22	22	20
5			14	14	14	15	17	20	22	22	22	22	22	20
6			20	20	21	22	22	24	24	24	24	24	24	22
7			17	17	18	19	20	20	22	22	22	22	22	20
8			20	20	21	22	22	24	24	24	24	24	24	22
9			17	17	18	19	20	20	22	22	22	22	22	20
10			20	20	21	22	22	24	22	22	22	23	23	21
11			18	18	19	20	21	20	22	22	22	23	23	21
12														
13			17	17	18	19	20	20	22	22	22	22	22	20
14			20	20	21	22	22	24	24	24	24	24	24	22
15			18	18	19	20	21	20	22	24	24	23	23	21
16			20	20	21	22	22	24	24	24	24	24	24	22
17			20	20	21	22	22	24	24	24	24	24	24	22
18			20	20	21	22	22	24	24	24	24	24	24	22
19			18	18	19	20	21	20	22	22	22	22	22	20
20			17	17	18	19	20	20	22	22	22	23	23	21
21			18	18	19	20	21	20	22	22	22	22	22	20
22			17.89473684	17.89473684	18.73684211	20	20.66666667	21.64705882	22.55555556	22.77777778	22.77777778	22.88888889	22.88888889	
23			18	18	19	20	21	22	22	22	23		23	21
24			20	22	22	23	23	24	24	24	25		25	23
25			19	16	16	18	18	18	18	18	18		23	21
26			18	18	18	20	21	21	21	22	23		23	21
27			18	18	18	20	21	21	21	22	23		23	21
28			25	25	25	26	26	26	26	26	27		27	25
29			22	19	20	20	21	21	21	21	22		22	20
30			25	25	25	26	26	26	26	26	26		26	24
31			24	25	25	26	26	26	26	27	27		27	25
32			20	19	20	20	21	21	21	21	22		22	20
33			20	22	22	23	23	23	23	24	25		25	23
34			18	18	18	20	21	21	21	21	22		22	20
35			25	19	20	21	22	22	22	23	23		23	21
36			21	22	22	23	23	23	24	24	25		25	23
37			25	25	25	26	26	26	27	27	27		27	25
38			24	19	20	21	22	22	22	23	23		23	21

Appendix E: 2015 Local Data Compared to State Data



	Grade 3			Grade 4			Grade 5			Grade 6			Grade 7			Grade 8		
	ELA Percent Pass	Math Percent Pass	Both Math and ELA Percent Pass	ELA Percent Pass	Math Percent Pass	Both Math and ELA Percent Pass	ELA Percent Pass	Math Percent Pass	Both Math and ELA Percent Pass	ELA Percent Pass	Math Percent Pass	Both Math and ELA Percent Pass	ELA Percent Pass	Math Percent Pass	Both Math and ELA Percent Pass	ELA Percent Pass	Math Percent Pass	Both Math and ELA Percent Pass
2015 STATE AVERAGES	75.3%	64.9%	59.6%	71.5%	66.1%	58.2%	65.7%	68.7%	56.0%	66.2%	62.4%	53.3%	65.5%	53.1%	47.2%	62.8%	52.7%	46.3%
	66.3%	50.5%	45.9%	57.9%	44.7%	34.2%	54.5%	53.2%	41.5%	67.0%	52.9%	46.6%	64.1%	53.4%	44.3%	66.4%	54.0%	49.6%
	-9.0%	-14.4%	-13.7%	-13.6%	-21.3%	-24.0%	-11.2%	-15.5%	-14.6%	0.8%	-9.6%	-6.7%	-1.3%	0.3%	-3.0%	3.6%	1.3%	3.4%
	Class of 2024			Class of 2023			Class of 2022			Class of 2021			Class of 2020			Class of 2019		
2014 STATE AVERAGES	85.5%	83.1%	77.8%	87.1%	84.8%	79.2%	82.6%	90.5%	79.5%	79.4%	86.8%	75.2%	77.8%	81.2%	71.5%	76.2%	82.7%	71.3%
	81.7%	69.2%	65.0%	78.4%	79.2%	68.8%	73.7%	85.9%	68.7%	75.6%	83.1%	67.7%	78.4%	82.1%	73.1%	71.0%	76.6%	64.5%
	-3.8%	-13.9%	-12.8%	-8.7%	-5.6%	-10.4%	-8.9%	-4.6%	-10.8%	-3.8%	-3.8%	-7.5%	0.5%	0.9%	1.6%	-5.3%	-6.1%	-6.8%
	Class of 2023			Class of 2022			Class of 2021			Class of 2020			Class of 2019			Class of 2018		
2013 STATE AVERAGES	87.6%	83.0%	79.1%	85.6%	85.5%	78.6%	80.6%	88.5%	77.2%	78.8%	85.6%	74.0%	74.5%	81.8%	69.5%	76.2%	82.2%	71.1%
	86.1%	77.0%	73.8%	79.6%	83.7%	75.5%	77.8%	85.8%	75.4%	77.7%	75.0%	66.9%	67.7%	80.3%	62.9%	77.0%	81.2%	72.0%
	-1.5%	-5.9%	-5.3%	-6.0%	-1.8%	-3.0%	-2.9%	-2.7%	-1.8%	-1.1%	-10.6%	-7.1%	-6.8%	-1.5%	-6.6%	0.8%	-1.1%	0.9%
	Class of 2022			Class of 2021						Class of 2019			Class of 2018			Class of 2017		
2012 STATE AVERAGES	87.4%	81.3%	77.3%	83.0%	81.1%	74.0%	78.8%	87.7%	75.1%	79.9%	84.6%	74.1%	76.8%	80.2%	70.2%	73.7%	81.2%	68.4%
	87.0%	70.0%	68.0%	84.4%	90.6%	78.9%	75.3%	87.7%	72.1%	75.8%	86.7%	71.9%	68.9%	73.6%	64.2%	72.6%	74.1%	69.0%
	-0.4%	-11.3%	-9.3%	1.4%	9.6%	4.9%	-3.5%	0.0%	-3.0%	-4.1%	2.1%	-2.2%	-8.0%	-6.6%	-6.0%	-1.1%	-7.1%	0.6%

Appendix F: Fourth Grade 2018 ISTEP Data

=SUM(AW3-AX3)

Enr Grad	Subject			Gender	PrimExce	SocioEco	504	PerfLvl	SCALE SCORE	GR 4 ELA CUT	DIFF	Read Lit Vocab	Rd Lit Voc Cut	DIFF	Read NonFic Voc Media Lit	Rd NonFic Voc Media Lit Cut	DIFF	Writ Genres Process	Writ Genres Process Cut	DIFF	Writ Conventions	Writ Conv Cut	DIFF
4	E			F	0	Y	N	DNP	429	456	-27	28	39	-11	37	48	-11	35	43	-8	50	61	-11
4	E			F	0	N	N	PASS	500	456	44	60	39	21	66	48	18	58	43	15	74	61	13
4	E			F	0	N	N	DNP	455	456	-1	37	39	-2	44	48	-4	44	43	1	62	61	1
4	E			F	0	N	N	PASS	469	456	13	47	39	8	55	48	7	46	43	3	66	61	5
4	E			M	0	N	N	DNP	427	456	-29	30	39	-9	32	48	-16	34	43	-9	52	61	-9
4	E			M	7	Y	N	DNP	396	456	-60	18	39	-21	20	48	-28	28	43	-15	41	61	-20
4	E			M	0	N	N	DNP	396	456	-60	16	39	-23	22	48	-26	27	43	-16	43	61	-18
4	E			M	0	Y	N	PASS	464	456	8	40	39	1	53	48	5	44	43	1	64	61	3
4	E			F	0	N	N	PASS	527	456	71	69	39	30	75	48	27	64	43	21	81	61	20
4	E			F	0	N	N	PASS	501	456	45	60	39	21	67	48	19	56	43	13	74	61	13
4	E			F	0	Y	N	PASS	518	456	62	65	39	26	71	48	23	64	43	21	79	61	18
4	E			M	0	N	N	PASS	473	456	17	46	39	7	56	48	8	48	43	5	67	61	6
4	E			F	0	Y	N	DNP	436	456	-20	28	39	-11	40	48	-8	37	43	-6	55	61	-6
4	E			F	7	Y	N	DNP	414	456	-42	22	39	-17	28	48	-20	32	43	-11	48	61	-13
4	E			F	0	Y	N	DNP	430	456	-26	27	39	-12	36	48	-12	36	43	-7	52	61	-9
4	E			M	0	Y	N	PASS	510	456	54	60	39	21	71	48	23	60	43	17	77	61	16
4	E			M	7	N	N	DNP	417	456	-39	26	39	-13	33	48	-15	32	43	-11	45	61	-16
4	E			F	0	N	N	PASS+	588	456	132	88	39	49	87	48	39	79	43	36	92	61	31
4	E			F	0	Y	N	PASS	498	456	42	52	39	13	65	48	17	57	43	14	75	61	14
4	E			F	0	Y	N	PASS	518	456	62	65	39	26	71	48	23	63	43	20	79	61	18
4	E			F	0	Y	N	PASS	485	456	29	52	39	13	59	48	11	52	43	9	70	61	9
4	E			M	0	Y	N	PASS	509	456	53	86	39	47	52	48	4	56	43	13	60	61	-1
4	E			F	0	Y	N	DNP	448	456	-8	34	39	-5	46	48	-2	41	43	-2	59	61	-2
4	E			M	0	Y	N	PASS	503	456	47	63	39	24	65	48	17	57	43	14	76	61	15
4	E			F	0	Y	Y	DNP	450	456	-6	33	39	-6	46	48	-2	44	43	1	59	61	-2
4	E			F	0	Y	N	PASS	504	456	48	57	39	18	70	48	22	58	43	15	75	61	14
4	E			M	17	N	N	DNP	434	456	-22	31	39	-8	38	48	-10	36	43	-7	52	61	-9
4	E			F	17	Y	N	PASS	464	456	8	44	39	5	49	48	1	48	43	5	62	61	1
4	E			F	0	N	N	PASS	504	456	48	58	39	19	67	48	19	59	43	16	76	61	15
4	E			F	0	N	N	DNP	447	456	-9	32	39	-7	45	48	-3	40	43	-3	59	61	-2
4	E			F	0	Y	N	PASS	497	456	41	57	39	18	62	48	14	56	43	13	74	61	13
4	E			M	9	N	N	PASS	477	456	21	43	39	4	61	48	13	50	43	7	67	61	6
4	E			M	0	N	N	DNP	385	456	-71	14	39	-25	21	48	-27	23	43	-20	36	61	-25
4	E			M	0	Y	N	PASS+	542	456	86	79	39	40	78	48	30	68	43	25	83	61	22