ABSTRACT

Jennifer Evelyn Spivey, IMPROVING READING ACHIEVEMENT IN HARNETT COUNTY ELEMENTARY SCHOOLS THROUGH EARLY READING INTERVENTIONS: A PROGRAM EVALUATION OF READING RECOVERY AND LEVELED LITERACY INTERVENTION FOR FIRST GRADERS (Under the direction of Dr. James McDowelle) Department of Educational Leadership), March, 2019.

This program evaluation took place in Harnett County Schools, North Carolina. This study evaluated two common reading intervention programs currently used in the Harnett district. This evaluation compared and examined the effectiveness of Reading Recovery and Leveled Literacy Intervention on a subset of students at Highland Elementary School, a Title I School in Harnett County, North Carolina.

The study revealed that first grade students who received Reading Recovery and Leveled Literacy Intervention for twelve weeks for remediation in the area of reading showed reading growth. Reading Recovery and Leveled Literacy Intervention reading intervention programs are both designed to be short term, intensive reading programs for students below grade level reading standards. Both programs include phonics instruction, phonemic awareness, reading comprehension strategies, writing, assessment and school/home connection. Reading Recovery is administered in a one-on-one setting by highly trained reading specialists and Leveled Literacy Intervention is administered in a small group of six students or less students by traditional first-grade teachers. The study concludes that Reading Recovery and Leveled Literacy Intervention are both effective interventions for first grade struggling readers.

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IMPROVING READING ACHIEVEMENT IN HARNETT COUNTY ELEMENTARY SCHOOLS THROUGH EARLY READING INTERVENTIONS: A PROGRAM EVALUATION OF READING RECOVERY AND LEVELED LITERACY INTERVENTION FOR FIRST GRADERS

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DEDICATION

This study is dedicated to my niece, Lily Page Hardee, and all the students I am entrusted to serve.

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CHAPTER 1: INTRODUCTION

Description of Organizational Problem

Harnett County is a rural school district in the Sandhills Region of North Carolina. Harnett County Schools has 29 total schools and over 20,300 students (NC School Report Cards, 2017). According to 2016 United States census data, Harnett County's population is approximately 130,881. The majority of the population is Caucasian (71.7%) followed by African American (21.8%) and Hispanic (12.4%) and the median household income is $47,930 (U.S. Census Bureau, 2014). Harnett County Schools (HCS) serves over 20,000 students, and 17 elementary schools (HCS, 2018).

The students in the Harnett County School District have performed below the state of North Carolina on end of grade tests in grades three through five over the past two years (2015-2016, 2016-2017) for grade level performance composite in reading. This gap in achievement on reading standardized tests in elementary school poses a challenge for educators in the Harnett County district. An emphasis on improving reading performance for all students is not a new problem. The Bush Administration signed into law the *No Child Left Behind Act of 2001* in 2002, requiring states to improve all third grade students to a rating of proficiency by the 2013-2014 school year. President Bush also reenacted the *Elementary and Secondary Act* (ESEA) from 1965 which provides special funding for disadvantaged students (U.S. Department of Education, 2004). In 2012, North Carolina transitioned from the Adequate Yearly Progress (AYP) law associated with *No Child Left Behind* (NCLB) to the *Elementary and Secondary Education Act* (ESEA) which gave North Carolina flexibility to focus on growth as well as achievement. The

formula for ESEA for school performance grades breaks down as follows: proficiency is 80% of the composite score and growth is 20% of the composite score (NCDPI, 2016).

In 2013, the North Carolina General Assembly passed legislation for School Performance Grades (A–F) based on test scores and growth for all schools in North Carolina. Elementary school performance grades are determined by annual EOG math and reading assessments for grades 3-5 and science for grade 5. The percent of students scoring a Level III or higher is used to determine achievement for a school. End of Grade Assessments (EOG's) are scored as follows: Level I, Level II, Level III, Level IV and Level V. Students with scores of Level IV and Level V are considered career and college ready. Students with scores of Level III or higher are considered grade level proficient. Students scoring below a Level III are not considered grade level proficient and are not meeting state expectations. For 2016–2017 year, in North Carolina the grade designations are set on a 15-point scale: A = 85–100; B = 70–84; C = 55–69; D = 40–54; and F = 39. Specifically, the School Performance Grade is 80% achievement and 20% growth. Growth is determined by current and previous student scores using a model called Education Value-Added Assessment System (EVAAS) to determine whether schools are maintaining or increasing student achievement from one year to the next. Based on the EVAAS models, schools are labeled as did not meet expected growth, met expected growth or exceeded expected growth (North Carolina Public Schools, 2017).

During the 2015-2016 school year, Harnett County had 75% of schools scoring a C or better. In the 2016-2017 school year, Harnett County had 83.3% of schools scoring a C or better. Harnett County celebrates the 8% increase and the fact that the Harnett district performs above the state average in growth. However, as outlined in Table 1 and Table 2, grade level proficiency

Table 1

Breakdown of Grade Level Reading Proficiency in Harnett County vs. State 2015-2016

Organization	Harnett County Schools	State of North Carolina
Performance Composite Percent Grade Level Proficient	49.8%	58.3%
Grade 3 Reading Percent Grade Level Proficient	50.4%	57.7%
Grade 4 Reading Percent Grade Level Proficient	49.5%	58.0%
Grade 5 Reading Percent Grade Level Proficient	48.1%	55.4%

Note. (Holmes, 2016).

Table 2

Breakdown of Grade Level Reading Proficiency in Harnett County vs. State 2016-2017

Organization	Harnett County Schools	State of North Carolina
Performance Composite Percent Grade Level Proficient	51.3%	57.5%
Grade 3 Reading Percent Grade Level Proficient	51.1%	57.8%
Grade 4 Reading Percent Grade Level Proficient	52.9%	57.7%
Grade 5 Reading Percent Grade Level Proficient	52.9%	56.6%

Note. (NC School Report Cards, 2017).

for Harnett County, students scoring a Level III, Level IV or Level V on end of grade tests in elementary schools, was 49.8 % as compared to the state mean of 58.3 % in 2016 and 52.0% as compared to the state mean of 58.8% in 2017. Gaps in grade level proficiency exist across all subject areas in Harnett County as compared to the state but most significantly in reading with a negative difference of 7.3 percentile points in Grade 3, 8.5 percentile points in Grade 4, and 7.3 percentile points in Grade 5 as compared to the State of North Carolina mean in 2016 (Holmes, 2016). In 2017, Harnett County showed a negative difference of 6.7 percentile points in Grade 3, 4.8 percentile points in Grade 4 and 6.3 percentile points in Grade 5 as compared to the North Carolina state mean (NC School Report Cards, 2017). This pattern of data reads to an overarching question of: What is causing this gap in reading performance in elementary schools in Harnett County?

Specific to schools, there are gaps in performance in subgroups as well. Harnett County School's Strategic Plan identifies the different subgroups in the Harnett District as follows: 50.8% White, 25.2% Black, 17.3% Hispanic, 5.0% Multi-Racial, 12.2% Students with Disabilities, 6.8% English Language Learners and 58% Free and Reduced Lunch (HCS Strategic Plan, 2013). In Harnett County, 100% of elementary schools are labeled Title I schools. Elementary schools with 40% or higher economically disadvantaged populations are considered Title I schools. Title I schools receive federal funding to support students from lower income homes (North Carolina Public Schools, 2017). Out of Harnett County's seventeen elementary schools, thirteen have poverty rates exceeding 60%. Harnett County has nine elementary Focus Schools. Focus schools are Title I schools that are contributing to the State Achievement Gap. This gap is between the highest achieving subgroups and the lowest achieving subgroups (North

Carolina Public Schools, 2017). Economically disadvantaged students in Harnett County elementary schools consistently score below the district and state average in reading.

Gaps in reading achievement are visible early in the educational journey. For two consecutive years, over half of Kindergarten students scored below state standards of proficiency on beginning of year reading mClass assessments in Harnett County, beginning of year reading tests, a universal screener for early reading skills. The mClass assessment measures two major components: Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading Comprehension (TRC). Information from these assessments provide teachers with individualized information to improve student's reading progress and track student progress. In Harnett County, according to mCLASS beginning of year assessments, a new Kindergarten student should score a Reading Behaviors (RB). Reading Behaviors (RB) measures the knowledge of basic support behaviors for literacy development and reading readiness. Students who score 4 or fewer are identified as frustrational (FRU) and students who score 5 or 6 are marked as independent (IND). Students are assessed for their ability to maintain a language pattern (Wake County Public School System [WCPSS], 2017). In Harnett County in the 2015-2016 school year, 65% of Kindergarten students were below beginning of year expectations for literacy and in the 2016-2017 school year, 55% of Kindergarten students were below beginning of year state expectations for literacy (Holmes, 2017).

Poverty and Reading Achievement: State and Local Trends

Specific to North Carolina, one in five North Carolina children live in poverty and more than one in ten North Carolina children live in extreme poverty. Fifty-three percent of North Carolina's public school students live in poverty, ranking 15th out of the 50 states for highest childhood poverty. As a revision to the No Child Left Behind (NCLB) law, in 2013 the North Carolina General Assembly passed the Excellent Public Schools Act which awards schools a

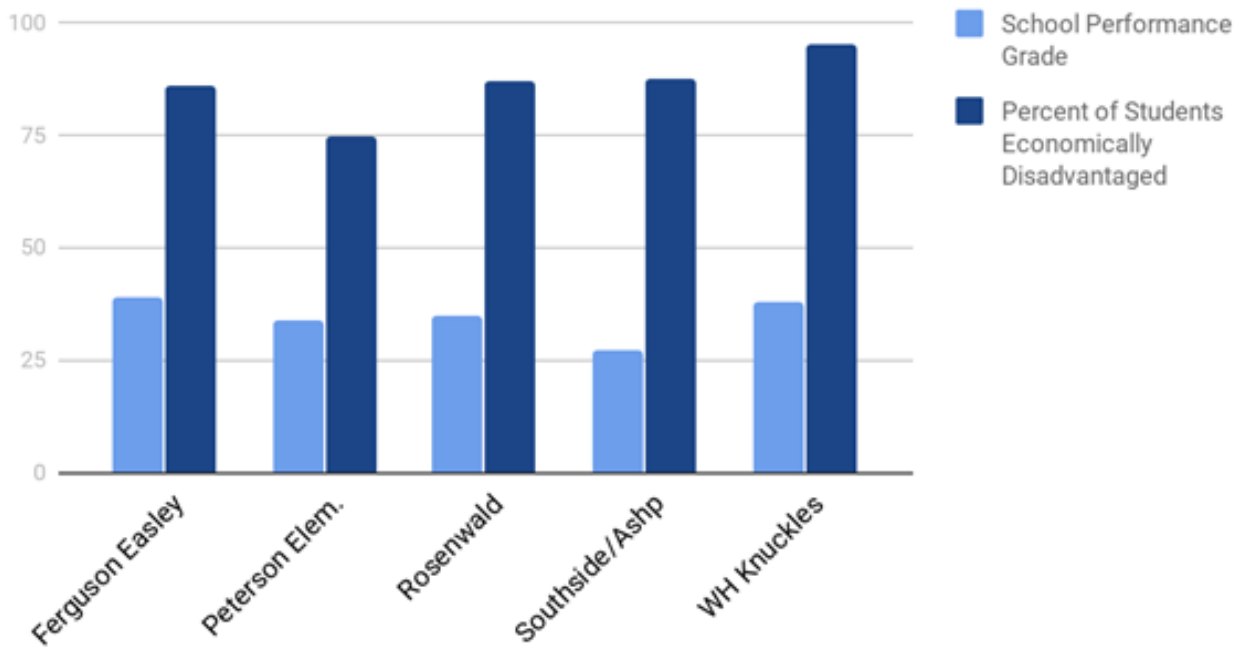
letter grade, A-F, based on the following formula: 80% performance on end of grade test results and 20% school growth based on SAS EVAAS (Education Value-Added Assessment System). In September 2016, the second round of school performance grades in North Carolina were published, and there was clear correlation between poverty and lower ratings. Ninety eight percent of schools receiving an F grade had poverty rates of 50% or higher, and schools with greater poverty had more Cs, Ds and Fs than schools of higher socioeconomic status (Public Schools First NC, 2016). In the 2016-2017 school year all elementary schools in the Sandhills region of North Carolina with school performance grade of an F all had poverty rates exceeding 74% (North Carolina Public Schools, 2017). These data are visible in Figure I.

There are many critics of this grading system, such as former State Superintendent June Atkinson:

> We know that students who come from poor circumstances often make significant academic growth each year, but they often begin school behind their more affluent peers and have many obstacles to overcome. Many of our children living in poverty do not have access to preschool education – a well-researched strategy for improving student achievement (Henkel, 2015, paragraph 4).

Harnett County shows similar trends. Out of the elementary school Cs and Ds in the Harnett District, 100% have poverty rates exceeding 50% (Holmes, 2016). Reading achievement continues to be a large concern in Harnett County District. Harnett County Schools performs below the state mean on Grades 3-5 reading end of grade tests and that gap is larger for students from low income households.

To add some perspective, we will examine reading performance at the largest elementary school in the Harnett District, Highland Elementary School. As outlined in Tables 3-5, economically disadvantaged students at Highland Elementary School had a gap in reading achievement of 14.1% in the 2015-2016 school year and a gap in reading achievement of 13.8% in the 2016-2017 school year (NC School Report Cards, 2017). What can be done to improve overall reading proficiency in these subgroups and overall in Harnett County elementary schools? Early intervention in reading is key to improving reading achievement in the Harnett



Note. (North Carolina Public Schools, 2017).

Figure 1. Correlation between 2017 school performance grades in elementary schools and poverty in the Sandhills region.

Table 3

Overall Reading Proficiency in 3-5 Harnett County Elementary Schools vs. Economically Disadvantaged Students in 2015-2016

Elementary School/Overall Reading Proficiency 15-16 School Year	Economically Disadvantaged Reading Proficiency 15-16 School Year	Difference Between All Students and Low Income Students for the 15-16 School Year (in percentile points)
Angier - 38.9%	32.3%	-6.6
Benhaven - 55.7%	49.4%	-6.3
Boone Trail - 49.5%	37.9%	-11.6
Buies Creek - 63.3%	50.0%	-13.3
Coats - 46.6%	38.9%	-7.7
Erwin - 54.5%	46.7%	-7.8
Highland - 57.5%	44.1%	-13.4
Johnsonville - 40.6%	35.1%	-5.5
LaFayette - 64.3%	51.0%	-13.3
Lillington Shawtown - 43.5%	35.4%	-8.1
Overhills - 47.9%	36.3%	-11.6
South Harnett - 48.0%	37.5%	-10.5
Wayne Avenue - 40.6%	33.5%	-7.1

Note. (Holmes, 2016).

Table 4

Overall Reading Proficiency in Harnett County Elementary 3-5 Schools vs. Economically Disadvantaged in 2016-2017

Elementary School/Overall Reading Proficiency 16-17 School Year	Economically Disadvantaged Reading Proficiency 16-17 School Year	Difference Between All Students and Low Income Students for the 16-17 School Year (in percentile points)
Angier – 44.5%	35.4%	-9.1
Benhaven - 59.3%	58.6%	-0.7
Boone Trail - 51.9%	40.3%	-11.6
Buies Creek - 63.4%	55.1%	-8.3
Coats - 49.3%	39.0%	-10.3
Erwin – 49.3%	40.7%	-8.6
Highland - 55.3%	*43.7%*	*-11.6*
Johnsonville - 49.4%	45.7%	-3.7
LaFayette - 68.4%	55.7%	-12.7
Lillington Shawtown - 48.6%	41.1%	-7.5
Overhills - 53.0%	41.6%	-11.4
South Harnett - 41.9%	29.2%	-12.7
Wayne Avenue - 47.4%	41.6%	-5.8

Note. (NC School Report Cards, 2017).

Table 5

Description of Intervention Programs

Program Characteristics	Leveled Literacy Intervention	Reading Recovery
Purpose	The goal is to Increase the literacy achievement of students reading below grade level expectations.	Reading Recovery strives to help the lowest achieving readers make accelerated progress.
Recommended Time Frame	Primary (in Grades K-2) LLI is a short term intervention usually designed for 12-18 weeks, 30 minutes a day, 5 times a week.	Reading Recovery is designed as an intensive short term intervention (usually 12-20 weeks). Reading Recovery lessons last approximately 30 minutes, 4-5 times a week.
Recommended Participants	LLI is designed for students in Grades K-12 reading below grade level in a small group setting (6 or less) (Heineman, 2018a).	Reading Recovery is designed specifically for first graders in a one-on-one setting (Reading Recovery, 2016a).

District. Unfortunately, poverty and literacy readiness are closely related. Nationally, first graders from lower socioeconomic backgrounds displayed 50% smaller vocabularies than their peers from higher socioeconomic backgrounds. More than 60% of low-income households have no children's books in the home (Lauer, 2010).

Problem of Practice

A problem of practice is designed to identify a significant problem within an organization. Once the problem is identified and agreed upon by senior leadership, in this case within the Local Education Agency (LEA) of Harnett County, the research practitioner analyzes and collects data to look for trends, intensely reviews literature, and proposes a plan of action to help solve the problem (Archibald, 2008). The ultimate goal is to help Harnett County Schools improve and raise student achievement in reading based on recommendations of changed practices.

Problem Statement

More than half of the Kindergarten students in Harnett County come to school ill prepared to meet North Carolina state reading requirements. End of Grade reading assessment data in Grades 3-5 shows a gap in achievement in Harnett County Schools grade level proficiency in reading as compared to the state of North Carolina for the past two years as shown in Figures I and II. There is also a gap in achievement in reading for low income students in 100% of Harnett County elementary schools compared to school and state reading proficiency means (NC School Report Cards, 2017). Too few economically disadvantaged elementary aged students in Harnett County are reading on grade level. Proactive, early reading programs are needed to close this achievement gap and increase overall reading proficiency in Harnett County. In the Harnett District, two common reading programs are used as early interventions for

reading: Leveled Literacy Intervention and Reading Recovery. This study will evaluate each program's effectiveness on a subset of first grade students at Highland Elementary School in Harnett County through a formal program evaluation of Reading Recovery and Leveled Literacy Intervention.

Problem Background

Poverty comes in many different forms. Situational poverty is caused by a sudden loss or crisis; generational poverty involves at least two generations of poverty; absolute poverty, very rare in the United States, is when basic needs are not met such as shelter; and relative poverty is when family income is insufficient based on the current standard of living. Urban poverty refers to populations larger than 50,000, and rural poverty refers to populations below 50,000. Most children raised in poverty start school behind their financially stable peers. Decreased cognitive stimulation in early childhood negatively impacts vocabulary growth, IQ, and social skills (Jenson, 2009).

Poverty can have a negative impact on reading readiness and performance for children. Children from low-income homes make up almost 75% of the country's population reading below the 25th percentile. Research shows children reading below grade level by third grade are four times as likely to be high school dropouts (Allyn & Morrell, 2016). Students in the bottom quintile of family socioeconomic status score more than one standard deviation below those in the top quintile for family socioeconomic status on standardized tests for math and reading when they enter Kindergarten, and this gap does not appear to change as children progress through school (Reardon, 2011). For low-income families, "82 percent of students eligible for free or reduced lunches cannot read with proficiency" (Reading Partners, 2019). There are federal programs to help low income students such as Title I funding. Title I funds for schools provide

financial assistance to local educational agencies (LEA's) and public schools with high percentages of poor children to help ensure all students regardless of socioeconomic status, achieve high academic achievement (North Carolina Public Schools, 2017).

In North Carolina, 52% of public school students live in poverty and based on the *Excellent Public Schools Act*, schools with higher poverty rates had more Cs, Ds and Fs than schools with less poverty and 98% of schools that received an F grade had 50% or higher rates of poverty (Public Schools First, 2016). In the state of North Carolina there is heightened attention on reading achievement through a law implemented entitled *Read to Achieve.* Passed in July 2012, under the *Excellent Public Schools Act* in North Carolina, third graders who are not reading at grade level by the end of the year receive extra help including summer reading camp to make sure students are prepared to succeed in fourth grade (NCDPI, 2016). State and local programs currently available to help low income families with literacy include:

1. NC Pre-K: A state funded program designed to provide quality education to increase school readiness for eligible four-year-olds. Families must meet certain criteria based on income.
2. Smart Start: A nationally recognized, public-private initiative that provides early education funding to all of North Carolina's 100 counties (Harnett Smart Start, 2017).
3. Harnett County Kindergarten Pre-Assessments: Once a student registers in Harnett County for Kindergarten, teachers assess letter and sound recognition to inform instruction.
4. Dolly Parton's Imagination Library: A book distribution program for families in need (Dolly Parton Imagination Library, 2018).

The most common existing Harnett County Schools early reading intervention programs include:

1. Leveled Literacy Intervention: A supplemental, short-term small group reading program for struggling readers (Fountas & Pinnell, 2018).
2. Reading Recovery: A short-term intervention of one-to-one tutoring for low-achieving first graders. In Harnett County data teams meet to determine the most at-risk first graders to serve.

Definition of Terms

Adequate Yearly Progress (AYP) - Annual achievement targets under the No Child Left Behind Law for various subgroups based on demographics and total student populations (Klein, 2015).

DIBELS (Dynamic Indicators of Basic Early Literacy Skills) - Subtests used on the mClass assessment including: letter naming fluency, first sound fluency, phonemic segmentation fluency, nonsense word fluency, dynamic oral reading fluency, and maze comprehension task (WCPSS, 2017).

Elementary and Secondary Education Act (ESEA) - Passed in 1965, establishing a definitive role for the federal government in K-12 policy and offering over a billion dollars annually through Title I funds for disadvantaged students (Klein, 2015).

EVAAS (Education Value-Added Assessment System) - A growth model which uses current and historical student test data to determine whether schools are maintaining or increasing student achievement from one year to the next. Based on this data, schools receive a classification of exceeded growth, met growth or did not meet expectations (North Carolina Public Schools, 2017).

Excellent Public Schools Act - A law passed in 2013 created as a revision to the No Child Left Behind (NCLB) law which awards schools a letter grade, A-F, based on the following

formula: 80% performance on end of grade test results and 20% school growth based on SAS EVAAS (Public Schools First NC, 2016).

Focus School - A term established with the Obama administration's No Child Left Behind Act waivers which refers schools with difficult achievement gaps or weak performance among subgroups of students such as English Language Learners; states must identify 10% of their schools as focus schools (Klein, 2015).

mClass - A universal screener that measures the development of reading skills of K-5 students through two main assessments: Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading Comprehension (TRC) (WCPSS, 2017).

No Child Left Behind - A law passed in 2002 updating the Elementary and Secondary Education act and increasing the federal role in student accountability. The law was passed under the Bush administration with bipartisan support with a goal of reducing achievement gaps in various underperforming subgroups. States that did not meet the law's requirements risked losing federal Title I money (Klein, 2015).

North Carolina End of Grade Tests - Assessments designed to measure student performance on the goals, objectives, and grade-level competencies as specified by the North Carolina Standard Course of Study (North Carolina Public Schools, 2017).

Priority School - A term under the Obama administration's No Child Left Behind Act waivers which refers to the lowest performing schools in the state; states must identify at least 5 percent of schools as priority schools (Klein, 2015).

North Carolina School Performance Grades - Grades (A-F) based on student achievement (80%) and growth (20%). The elementary school indicators used for achievement include performance on end of grade assessments in reading and math in Grades 3-4 and

performance on end of grade tests in reading, math and science for Grade 5. Elementary school growth data is determined by EVAAS growth model (North Carolina Public Schools, 2017).

Title I - A section of The No Child Left Behind law that provides federal funding allotted to school districts to educate economically disadvantaged children (Klein, 2015).

TRC- Text Reading and Comprehension -A part of the mClass assessment that measures print concepts, reading behaviors, word recognition and for higher reading levels reading comprehension and written comprehension (WCPSS, 2017).

CHAPTER 2: LITERATURE REVIEW

Poverty and Reading Achievement: National Trends

Sixty eight percent of America's fourth graders do not read at a proficient level, and one of out of six children who read below grade level at the end of third grade will not graduate from high school. The correlation with poverty and reading readiness is alarming: "61% of low-income families have no age-appropriate books in their homes" (Children's Literacy Foundation, 2019). To add more perspective, the average middle class child has been exposed to 1,000 to 1,700 hours of one-on-one picture book reading as compared to the average low-income child who has only been exposed to 25 hours of one-on-one reading (Children's Literacy Foundation, 2019). Research from the National Assessment of Educational Progress shows that a 40% variation in average reading scores nationwide is associated with variance in childhood poverty rates (Ladd & Fiske, 2011). Increased poverty has been associated with decreased reading ability in numerous studies.

Elementary reading performance in the United States is hard to compare objectively without a common reading assessment. A recent study by Sean Reardon at Stanford University sheds light on reading performance nationwide by identifying school districts and communities where performance is high and comparing them to demographically similar ones that do less well to determine the difference. This study included 40 million third to eighth grade students during 2009-2013 in every public school district in the country. Findings show the most and least socioeconomically advantaged districts have average performance levels more than four grade levels apart, and "achievement gaps are larger in districts where black and Hispanic students attend higher poverty schools than their white peers; where parents on average have high levels

of educational attainment; and where large racial/ethnic gaps exist in parents' educational attainment" (Rabinovitz, 2016, p. 1).

This problem in the gap in achievement between low income children as compared to their well-off peers, has been recognized by national leaders. Dating back to 1965, President Lyndon B. Johnson endorsed and passed the Elementary and Secondary Education Act (ESEA) which created a role for the federal government to aid low income school districts, known as Title I, providing financial assistance for economically disadvantaged students. Title I funds continue to help low income schools and districts today nationwide with funding. One of the most famous and now controversial efforts to close the achievement gap for poor children is the *No Child Left Behind* (NCLB) law, a collaborative effort on behalf of business groups, civil rights groups, Democrats and Republicans, and the Bush administration passed in 2002. The goal is to close the achievement gap between poor and minority students and their well-off peers and increase the United States' global competitiveness in education. NCLB focuses on ensuring that states and schools raise student achievement in poor and minority children as well as certain subgroups such as special education. If states did not adhere to the law's requirements, they risked losing federal Title I funding. This law is controversial because it tasked low income schools with reaching the same proficiency as higher income schools by the year 2013. The law kept track of school progress using adequate yearly progress (AYP) reports. Schools that did not meet AYP were held to the following sanctions:

> A school that misses AYP two years in a row has to allow students to transfer to a better-performing public school in the same district. If a school misses AYP for three years in a row, it must offer free tutoring. Schools that continue to miss achievement targets could face state intervention. States can choose to shut these schools down, turn them into charter schools, take them over, or use another, significant turnaround strategy. What's more, schools that don't make AYP have to set aside a portion of their federal Title I dollars for tutoring and school choice. Schools at the point of having to offer

> school choice must hold back 10 percent of their Title I money (Klein, 2015, p. 1, paragraph 9).

Literacy: The Importance of Early Reading Education

The consequence of not closing literacy gaps early can have long-term effects. Children not reading on grade level by the end of first grade have only about a 10% chance of reading on grade level by the end of fourth grade. Reading failure affects approximately 30% of our nation's children and is disproportionately prevalent among low-income children. Long-term effects of reading deficits in children have been linked to increased risk for high school dropout, criminal activity, unemployment and long-term poverty. Research consistently supports the power of early reading intervention. The longer a failing reader goes without help, the less likely he is to catch up. Early reading intervention is crucial for a child's development and a key indicator of future academic and societal success (Nemours, 2013). The 2009 National Assessment of Educational Progress (NAEP) reading test showed that 83% of children from low income families failed to meet the "proficient" level in reading. Six point six million low income children between the ages of birth to age 8 are at an increased risk of failing to graduate high school on time due to not meeting grade level proficiency as outlined by the National Assessment of Educational Progress by third grade (Annie E. Casey Foundation, 2010).

History of Reading Instruction

Learning to read is a complex process. Historically reading instruction has been debated and changed over the years. In the mid 1700s through the early 1800s children were taught to read through memorization of the alphabet and spelling lists. Most children learned to read by reading the Bible. Jeffersonian ideals shifted a focus from strictly memorization to phonics and meaning-based reading instruction in the mid 1800s. There was also a shift to leveled reading instruction instead of all-purpose reading materials. The next large shift in reading instruction

occurred in the 1930s with the whole word approach to reading. Children were taught to look-say with a large emphasis on comprehension. *Dick and Jane* reading series were very popular during this time. In Rudolph Flesch's bestselling book *Why Johnny Can't Read,* a return to phonics instruction was emphasized. Flesch criticized the look-say approach even calling it a threat to democracy. In the 1970s a whole language philosophy is popular with a focus on how readers construct meaning (Halford/ASCD, 1997). Whole language reading instruction, a non-phonics approach to teaching reading, became the primary method of reading instruction in the 1980s and 1990s. During this time many researchers such as the National Institute of Health found that early reading acquisition is directly connected to a child's ability to connect sounds and letters or phonics.

Phonics instruction teaches sounds that are associated with letters and combinations of letters. Supporters of phonics believe children develop large reading and spelling vocabularies. Critics of phonics cite that some students have difficulty with certain rules and comprehension of texts. There are now numerous studies that find this to be untrue. Students who receive phonics instruction from a trained reading specialist have yielded much success in reading acquisition (K12 Academics, 2018). The overall goal of phonics instruction is to teach children sound-spelling relationships that enable students to decode words. The ability to decode is a crucial skill for struggling readers to gain. Learning patterns and common sound/spelling relationships allows readers to sound out words and learn spelling patterns. Increased fluency or the ability to read with ease and independently sound out words increases reading comprehension. Effective phonics teaching should begin with explicit instruction. The teacher helps the child apply sound-spelling relationships to reading. Phonemic awareness is the ability to understand that words are made of sounds and is also important for phonics instruction to be successful (Blevins, 2019).

In 1997, Congress asked the Director of the National Institute of Child Health and Human Development (NICHD) and the Secretary of Education to create a national panel to review reading instructional practices. In 2000, the National Reading Panel released a 449 page report consisting of meta-analysis report on evidence based reading instruction entitled "Teaching Children to Read: An Evidence Based Assessment of the Scientific Research Literature on Reading and the Implications for Teaching Reading. Key themes/implications for effective reading instruction were emphasized in this study: the importance of parents in early reading development, the importance of identifying early children at risk for reading failure, the importance of using a variety of reading approaches interrelated, the need for scientifically based reading instruction, and the importance of teachers and their professional development and inclusion in reading research. The National Reading Panel intensively studied the following areas and deemed them most influential to reading success: alphabetics (phonemic awareness and phonics instruction), fluency, comprehension (vocabulary instruction, text comprehension instruction and teacher preparation and comprehension strategies), teacher education in reading instruction and computer technology in reading instruction (Langenberg, Correro, Kamil, Samuels, Shaywitz, & Willows, 2000).

The most recent teaching standards adopted by the United States in 2010, Common Core State Standards, have an increased focus on the importance of reading and reading comprehension. These standards are designed to prepare students for college and the workforce. The new English Language Arts standards History/Social Studies, Science, and Technical in grades K-12 ask students to read more complex texts and require students to thinking critically and analytically about texts. The overarching goal of the English Language (ELA) standards was

to be foundational tools to promote 21st century literacy and success (Common Core State Standards Initiative, 2018).

Read to Achieve: State Focus on Early Reading Intervention

The state of North Carolina recognizes the importance of early reading intervention. North Carolina passed the Read to Achieve legislative initiative as a part of the Excellent Public Schools Act in July 2012. This law intensely focuses on identifying and helping struggling readers early. Students in North Carolina receive extra attention in Grades kindergarten through third grade. The overarching goal behind the Read to Achieve law is to ensure that all children are reading at or above grade level by third grade. Purposes outlined in the Read to Achieve legislation clearly focus on identifying and helping struggling readers early:

a. The purposes of this Part are to ensure that (i) difficulty with reading development is identified as early as possible; (ii) students receive appropriate instructional and support services to address difficulty with reading development and to remediate reading deficiencies; and (iii) each student and his or her parent or guardian be continuously informed of the student's academic needs and progress.
b. In addition to the purposes listed in subsection (a) of this section, the purpose of this Part is to determine that progression from one grade to another be based, in part, upon proficiency in reading (2012-142,s.7A.1(b).) (NCDPI Literacy Division, 2017, p. 1).

The law facilitates early grade reading proficiency by ensuring students in Kindergarten, first grade, second grade and third grade are assessed with valid diagnostic reading assessments. Currently schools are using mClass formative assessments to gauge student reading progress. At the end of third grade, students take their third grade end of course test in reading. If students are proficient on the end of grade test or an alternate state approved assessment, they are promoted to fourth grade. If students are not proficient on a state approved assessment or the end of grade test in reading, they are invited to summer reading camp and given an opportunity to retest. Students not proficient after summer reading camp fall in the following categories: third grade retention, third grade/fourth grade transitional class with a retained reading label or a fourth

grade accelerated class with a retained reading label. Students in these situations are paired with teachers selected based on evidence of positive student outcome in reading proficiency. North Carolina recognizes the need for early reading intervention before the end of third grade (NCDPI Literacy Division, 2017).

Strategies to Improve Reading Performance in Elementary Aged Children

Research supports a comprehensive approach to literacy instruction in order to improve reading performance. Authors Irene Fountas and Gay Su Pinnell (2006) emphasis creating a quality reading environment with shared reading and language experiences. Instruction should include whole group with interactive read aloud, shared reading, story-telling, phonics/word study and mini-lessons, small group teaching or guided reading and individual teaching (Fountas & Pinnell, 2006). Assessment is another important component of a quality reading program. Quality reading assessment programs should include the following characteristics: easily understood by school staff, baseline literacy information about the child, ongoing monitoring tools, authentic reading and writing tasks, progress monitoring documentation and alignment with state assessments (Askew, Pinnell, Scharer, 2014). Comprehensive, quality reading programs involve parents and community through such strategies as summer reading programs, school events and sending books home (Brooks, Maktari, Scott, & Williams, 2017).

There is a rich correlation between writing and reading. Writing to read is another well founded approach to enhance children's reading ability. Steve Graham and Michael Herbert (2010) published a meta-analysis on the correlation between reading and writing. Graham and Herbert made the following recommendations: students should write about the texts they read, students should be taught the writing process to deepen their understanding of what goes into creating a text and students should gradually increase writing products. The study supports the

idea that teaching students how to write strengthens comprehension and fluency skills (Graham & Herbert, 2010).

Leveled Literacy Intervention

Fountas and Pinnell Leveled Literacy Intervention (LLI) is a supplemental literacy program designed to help struggling readers. The intervention program is designed for small group instruction and helps accelerate a child's reading level through leveled books and daily guided reading instruction to include phonics, fluency, reading comprehension and writing (Fountas & Pinnell, 2018). Leveled Literacy Intervention lessons are designed to last about thirty minutes and consist of four parts: rereading of books and assessment, phonics/word work, writing about reading and introduction of a new book. Some lessons also include optional letter/word work. Extension and individualized connections such as classroom and home connections are provided for teachers as well. Each reading level has about ten lessons. At the end of each lesson under the section entitled Continuum of Literacy Learning specific reading and writing behaviors are listed. For example, Level E behaviors and understandings are outlined for thinking within the text, thinking about the text and thinking beyond the text. With each subsequent reading level, the reader is expected to master more challenging tasks and understandings. Students are allowed to take home books to practice skills taught through a home connection. The take home books are typically in black and white and the books for LLI instruction during the school day are in color (Fountas & Pinnell, 2009).

Reading Recovery

Reading Recovery is a supplemental literacy intervention program used for early intervention in elementary aged students. In Reading Recovery the lowest 20% of first graders receive a 12-20 week intensive intervention with a specially trained Reading Recovery teacher.

Students receive intervention for 30 minutes each day until their gap in reading performance decreases. Reading Recovery has been recognized by many national reading agencies such as the National Center on Response to Intervention, the National Center on Intensive Intervention, and the U.S. Department of Education's What Works Clearinghouse. Reading Recovery lessons last approximately 30 minutes and have timed components: working with letters, reading the new book, teaching point with new book, working with letters, working with sounds, new book introduction, interactive writing, the cut-up sentence and final reflection of the lesson. Students practice reading strategies based on their respective reading levels. Teachers reinforce problem solving strategies provide a basis for students to be able to read independently. Students learn letter recognition with letter work and students build phonemic awareness with sound work. Interactive writing supports acquisition of sentence formation, sound/letter associations, concepts of print, punctuation, letter formation and spacing. Students are sent home each night with a familiar text to read at home for school/home connection (Reading Recovery Training Center, Clemson University, 2016a). The goal of Reading Recovery is to reduce the number of first-grade students who have difficulties learning to read and write and to reduce the cost of these learners to educational systems. Originally developed in New Zealand and introduced to the United States in 1984, Reading Recovery shows positive trends. Research shows approximately 75% of students who complete the full 12- to 20-week intervention can meet grade-level expectations in reading and writing. Additional studies show Reading Recovery students maintain their reading gains in later years. If students still have difficulty after a full intervention, students are recommended for additional evaluation. The diagnostic information from Reading Recovery is used to inform subsequent educational decisions (Reading Recovery Council of North America, 2018).

CHAPTER 3: METHODOLOGY-PROBLEM OF PRACTICE

Introduction

The purpose of this study is to address the following problem of practice in Harnett County Schools, North Carolina:

Over half of Kindergarten students in Harnett County come to school unprepared to meet state reading requirements. End of Grade reading assessment data in Grades 3-5 shows a gap in achievement in Harnett County Schools grade level proficiency in reading as compared to the state proficiency in reading. There is also a larger gap in reading achievement for low income students in 100% of Harnett County elementary schools compared to the overall school means for reading proficiency and the state reading proficiency mean (Holmes, 2016). Too few economically disadvantaged elementary aged students in Harnett County are reading on grade level. Proactive, early reading programs are needed to close this achievement gap and increase overall reading proficiency in Harnett County. For this reason, I am proposing an elementary reading program evaluation. Thus, a program evaluation of Reading Recovery and Leveled Literacy Intervention (LLI) will be conducted. This study will help leadership in Harnett County with reading instructional decisions. The goal is to improve early reading interventions for elementary students in Harnett County Schools to narrow the gap in achievement in reading performance in Harnett County elementary schools as compared to the state of North Carolina and to narrow the gap in reading performance between low income students by the end of first grade.

Research Study Questions

In order to reflect on best practices and improve overall reading instructional planning, the following questions were addressed in this study:

1. Will Reading Recovery have a positive impact on student academic achievement in reading for first grade students enrolled in the program at Highland Elementary School based on mClass assessments, teacher observation using an emerging literacy rubric and teacher perception surveys?
2. Will Leveled Literacy Intervention (LLI) have a positive impact on student academic achievement in reading for first grade students enrolled in the program at Highland Elementary School based on mClass assessment data, teacher observation using an emerging literacy rubric, and teacher perception surveys?

Participants

This study took place at Highland Elementary School (HES) in Harnett County, North Carolina. Three First Grade Teachers, one Instructional Coach, five Reading Recovery Teachers, and Harnett County Schools Testing and Accountability personnel fully implemented 2018-2019 Reading Recovery Program and Leveled Literacy Program for Highland Elementary School first graders reading far below grade level standards set by the state of North Carolina. The evaluation analyzed a variety of tools utilized during the implementation of the program: involvement documentation, mClass assessment data, teacher observations completed using an emerging literacy rubric and teacher perception surveys. The emerging literacy rubric was used in Reading Recovery to screen and select the most at risk readers. Teachers determined stanines for students far below in mClass. The stanine is a score categorized according to a normal curve into nine groups from 1, a low score to 9, a high score. Children within the 0-2 range were chosen to participate in the reading intervention programs in this study because they were unlikely to "catch up" without immediate, intensive reading interventions (Clay, 2013). No student names were identifiable in the data provided to the researcher.

Problem of Practice: Plan Do Study Act

Strategies for improvement were implemented on a small scale first. The student population during the 2018-2019 consisted of 1031 Kindergarten - Fifth Grade students. This study focused on data generated from a subset of first grade students. The program evaluation analyzed assessments conducted through mClass proficiency and growth, an Emerging Literacy Observation Survey, and a teacher perception survey. The primary goal was to analyze the effectiveness of two reading intervention programs in Harnett County. The goal identified was for Harnett County Schools to achieve a 15% improvement in performance within three years of the implementation of the new early reading intervention program/s in Grades K-2. Evaluation findings that identify problem solving strategies were shared with key stakeholders including first grade teachers, Title I Director for Harnett County Schools, Mrs. Dana Stephens, K-5 Director for Harnett County Schools, Mrs. Lesley Tyson, Assistant Superintendent of Harnett County Schools, Mrs. Brookie Ferguson and Superintendent of Harnett County Schools, Dr. Aaron Fleming.

Study Design

Because this study serves to evaluate program effectiveness, a program evaluation method will be conducted. The study design selected was the CIPP (Context, Input, Process, Product) Evaluation model. The CIPP Evaluation model will utilize a mixed-method approach of quantitative and qualitative research procedures. The CIPP Model dates back to 1965 when it was developed to evaluate federally supported projects on President Lyndon B. Johnson's War on Poverty. The CIPP Evaluation model aids organizational decision making through multiple methods with an emphasis on continual improvement. The CIPP Model uses both formative and summative evaluations. Formative evaluations help improve a program's implementation.

Examples include needs assessments, cost analysis and monitoring. Summative evaluations are comprehensive and is completed after a program has been completed. A retrospective, thorough summative evaluation gives stakeholders a comprehensive review of the project's quality, cost and overall effectiveness. Four fundamental questions are answered through the CIPP Model:

1. What needs to be done?

2. How should it be done?

3. Is it being done?

4. Did it succeed?

The model's primary orientation is to foster and assist program improvement through continuous, proactive, decision-oriented assessments. The model is also designed to meet the program's needs for accountability (Stufflebeam & Zhang, 2017, p. 21).

CIPP Product Evaluation for LLI and Reading Recovery

Through a CIPP Model, a comprehensive product evaluation will help Harnett County Schools and a broader educational audience determine cost-effectiveness in achieving goals and overall program effectiveness in meeting the needs of struggling readers. The main questions that will be addressed are:

1. Did the program achieve its goals?
2. Did it successfully address the main needs and problems?
3. Were there any unexpected outcomes (positive and negative)?
4. Were the program's outcomes worth the cost (Stufflebeam & Zhang, 2017)?

Research Setting

The program evaluation took place at Highland Elementary School in Harnett County, North Carolina. Harnett County is centrally located in the Sandhills region. Highland Elementary is the largest elementary school in the Harnett district, serving over 1000 students. Approximately 45% of Highland Elementary School's population is economically disadvantaged (North Carolina School Report Cards, 2017). This program evaluation focused on first graders at Highland Elementary School. Specifically, this study evaluated the impact of reading programs for students reading well below beginning of year grade level expectations at Highland Elementary School. Data from students who were reading in the "red" or "far below grade level" (a level B or lower) according to beginning of year mClass grade level expectations and an Emerging Literacy Survey were part of this study. Data was collected from approximately 6 first graders received Leveled Literacy Intervention as a 12 week reading intervention and approximately 20 first graders that received Reading Recovery as a 12 week reading intervention. The evaluation analyzed instructional data collected from five reading recovery teachers and eight first-grade teachers.

Data Collection and Analysis

Beginning of year, August 2018 assessment data was collected for first grade students at Highland Elementary School in Harnett County, North Carolina by their teachers and Reading Recovery teachers. Beginning of year mClass assessment data and an Emerging Literacy Observation Survey was used to select data for study participants. Students should be reading on a Level D/E according to state mClass quarterly benchmark goals for first grade (NCDPI Literacy Division, 2017). Students measured as reading "far below grade level" or in the red, a Level B or lower were eligible for this evaluation study. To ensure a more narrow comparison

study, an Emerging Literacy Observation Survey was used also. The emerging literacy rubric was used in Reading Recovery to screen and select the most at risk readers. Teachers determined stanines for students far below in mClass. The stanine is a score categorized according to a normal curve into nine groups from 1, a low score to 9, a high score. Children within the 0-2 range were chosen to participate in these reading programs because they were unlikely to "catch up" without immediate, intensive reading interventions (Clay, 2013). As part of the reading programs, students are assessed using growth in mClass levels from beginning of year to middle of year and growth on the Emerging Literacy Observation Survey from beginning of year to middle of year in the following areas: letter identification, word test, capital letters, writing vocabulary, hearing and recording sounds in words (HRSIW), text level and slosson. Six students were selected to receive Leveled Literacy Intervention as a reading intervention for 12 weeks and twenty students were selected to receive Reading Recovery as a reading intervention for 12 weeks as a reading intervention. The observation survey conducted by teachers administering the reading programs also collected detailed information about each child's reading behaviors and progress.

The program evaluation also included a qualitative component. A teacher perception survey was administered to instructors of the students receiving reading interventions. Finally, a cost analysis was conducted. The cost analysis included materials, trainings, and personnel costs involved with each respective program under evaluation. Ultimately, this evaluation determined the cost-effectiveness of Reading Recovery and Leveled Literacy Intervention in achieving goals and meeting targeted needs in early reading intervention in Harnett County Schools.

Summary

In summary, this study served as a program evaluation for early reading interventions in Harnett County. Using the CIPP product evaluation model for program evaluations, two reading intervention programs were evaluated: Leveled Literacy Intervention (LLI) and Reading Recovery. Quantitative measurements were used to measure reading level growth and reading behavior growth in first grade study participants. Qualitative measurements in the form of questionnaires were used to measure stakeholder perception of program effectiveness. Finally, a cost analysis was conducted to measure costs and overall program effectiveness. Following the improvement science model of plan, do, study act, Leveled Literacy Intervention and Reading Recovery early reading intervention programs were implemented small scale first at Highland Elementary School. Through analysis of data, revisions and proposed systematic decisions will be made to improve program planning for early literacy in Harnett County using the CIPP model for product evaluation. Measurement of program effectiveness occurred through mClass assessment growth, reading behavior growth through an Emerging Literacy Observation Survey, cost analysis, and teacher perception surveys. Finally, problem solving strategies were communicated to key stakeholders (Archbald, 2008)

CHAPTER 4: RESULTS

The purpose of this study was to evaluate the effectiveness of two common early literacy intervention programs in Harnett County Schools: Reading Recovery and Leveled Literacy Intervention. Effectiveness was measured through analysis of growth using an Observation Survey on Early Literacy and analysis of growth based on: beginning of year to middle of year mClass assessment data, a universal screener that measures the development of reading skills of all students in grades K-3 through two main assessments: Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and the Text Reading Comprehension (TRC) assessments and the main test recognized by the state of North Carolina to evaluate student's reading readiness (WCPSS, 2017). Additionally, qualitative data was collected from first grade teachers to determine perception of each program's effectiveness on student literacy acquisition. Finally, a cost analysis of both programs was conducted. Using the aforementioned evaluation methods and following the CIPP Product Evaluation Model, the evaluator answered the following questions:

Research Question I: Will Reading Recovery have a positive impact on student academic achievement in reading for first grade students enrolled in the program at Highland Elementary School for twelve weeks based on mClass assessment growth from beginning of year to middle of year, teacher observation using an emerging literacy survey rubric and teacher perception?

Research Question II: Will Leveled Literacy Intervention (LLI) have a positive impact on student academic achievement in reading for first grade students enrolled in the program at Highland Elementary School for twelve weeks based on mClass assessment growth data from beginning of year to middle of year, teacher observation using an emerging literacy rubric survey, and teacher perception?

The first analysis tool used to measure program effectiveness of Reading Recovery and Leveled Literacy Intervention was an Observation Survey of Early Literacy Achievement. The rationale for this assessment was to look beyond one assessment and focus on reading behaviors. In Clay's (2013) *An Observation Survey of Early Literacy Achievement*, she compares studying reading behaviors to coaching football: "The quality of the team play is not improved by looking at the final score. The coach must look closely at how the team is playing the game and help the players use strategic moves which produce a better final score" (Clay, 2013). This formative assessment enabled teachers to observe children's reading behaviors as they learn to read and write and monitor competencies and confusions, strengths and weaknesses, processing skills and evidences of what the child can already control (Clay, 2013). The following reading behaviors were pre and post tested after twelve weeks of early reading interventions for first graders.

Letter Identification

Students were assessed on all letters (lower case and upper case) using a letter identification score sheet. Students were scored as correct if they named an alphabet letter, named a sound acceptable for that letter or provided a word for which that letter is the initial letter or sound.

Word Test

This test took about two minutes to administer. Test administrators gave students three word lists and marked the total correct on a Word Reading Score Sheet. The total correct gives the accessor an indication of their reading vocabulary.

Concepts About Print (CAP)

Administrators used a Concepts About Print Score Sheet. This determined how much a child knew about written language and their environment. For example, where did a child start reading? What direction did a child move when reading? How did a child move through a word?

Writing Vocabulary

Students were allowed ten minutes to complete this task. Students were asked to write down as many words as they could write starting with their name. Administrators used a writing vocabulary observation sheet to record total words written by students/test score. The test score was then divided into stanine groups based on how old the child is at the time of the assessment.

Hearing and Recording Sounds In Words (HSIW)

Administrators used an observation sheet to evaluate the child's control of sound to letter links. The teacher read a sentence to the child to be written and the child wrote what he could and was encouraged to write what he heard in the words dictated. The sounds the child did not hear were recorded. Scores showed the degree of success the child had in hearing sounds in words and finding ways using the English spelling to record what he heard.

Slosson

The Slosson Oral Reading Test assessed a student's level of oral word recognition, word calling or reading level.

Text Level

Test administrators conducted a running reading record to determine how well the child read aloud orally and comprehended what he read. The total reading errors and self-corrections were recorded to determine reading fluency. Reading comprehension was measured by questions posed to the student about the text. Based on the total score of fluency, accuracy and

comprehension, an appropriate reading level was determined ranging om 0-24 (Clay, 2013). Each emerging reading behavior observation evaluated is also outlined in Appendix B.

The second quantitative measure of program effectiveness used in this study was the North Carolina standardized assessment, mClass, a universal screener that measures reading skill development of all students in grades K-5 in North Carolina public schools. Two main assessments are used: Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and the Text Reading Comprehension (TRC) assessments (WCPSS, 2017). Specifically, students were assessed using mClass in September, 2018, the beginning of the 2018-2019 academic school year, and in January, 2019, the middle of the 2018-2019 academic school year. Students in the study at Highland Elementary School received 12 weeks of intervention in either Reading Recovery or Leveled Literacy Intervention. Growth of students under evaluation was determined by how many reading levels a child increased from beginning of year to middle of year. The first graders under evaluation were expected to read at a Level D at the beginning of the year and to read at a Level F at the middle of year according to North Carolina state expectations. One hundred percent of the study participants were reading below grade level expectations at the beginning of the year and considered unlikely to catch up without immediate, intensive reading supports based on the Early Reading Observation Survey. All students who participated in the study had the same beginning of year rating based on the Early Reading Observation Study, 0-4, defined as unlikely to catch up with peers on reading levels without intensive reading support.

A combination of qualitative and quantitative data was collected using a Teacher Perception Survey/Likert Scale with open ended questions. Homeroom teachers of first grade students who participated in the study evaluation were given a survey. As outlined in Appendix

G, teachers were asked to respond to the following statements with strongly agree, disagree, neutral, agree, and strongly disagree.

1. The Reading Intervention Program had a positive impact on my student's reading fluency.
2. The Reading Intervention Program had a positive impact on my student's reading comprehension.
3. The Reading Intervention Program had a positive impact on my student's confidence as a reader.
4. The Reading Intervention Program had a positive impact on my student's writing ability.

The Likert Scale portion of the survey enabled the evaluator to quantify responses. To gather qualitative data, teachers were also allowed to provide open-ended comments about the program's effectiveness to examine teachers' perceptions of each respective program.

Following the CIPP Program Evaluation guidelines, a cost analysis for each reading program was also conducted. Costs were analyzed based on product costs required to serve first graders at Highland Elementary School. Personnel costs were not calculated in this study. The analysis strictly evaluated product costs for each respective program.

Finally, student attendance was averaged for study participants receiving both interventions to identify any outliers that could negatively impact program effectiveness. The average attendance for Reading Recovery intervention students was calculated. On average, Reading Recovery intervention students attended 53.7 days out of the 60. Due to this high average and a range of 8 days missed, attendance was not considered for this study as a significant impact on program growth or effectiveness. The average attendance for students who

received Leveled Literacy Intervention for 12 weeks was 55.2 days out of 60 days. The range in attendance for students who received LLI was 11 days missed. Again, there was not a significant variance in attendance or a low average. Consequently, attendance was not considered as a significant factor on program effectiveness based on student's daily attendance for the 12 week study. Daily attendance for study participants is outlined in Appendix F.

CIPP Product Evaluation for Reading Recovery

Quantitative Measures of Program Effectiveness

Based on the Emerging Literacy Survey and outlined in Figure 2, twelve weeks of Reading Recovery intervention had a positive impact on reading behaviors in the students under analysis. The average growth of reading behaviors is outlined in Figure 2 and in more detail in Appendix D. Students experienced the highest growth in writing vocabulary and slosson. One hundred percent of students improved in reading text levels with an average increase of six reading text levels from beginning of year to middle of year after receiving the RR intervention.

The second quantitative measure of effectiveness used in this study was growth in mClass reading levels based on the student's TRC. Out of the twenty original students under evaluation for Reading Recovery, three students moved over Winter Break, 2018 before middle of year mClass assessments. Consequently, seventeen students were measured for both beginning of year reading level in mClass and middle of year reading level in mClass. As outlined in Appendix E, the average growth of mClass reading levels for students who received 12 weeks of Reading Recovery intervention was 2.6 reading levels. The highest growth was observed in Student 12, this student moved up five reading levels and the lowest growth was in Student 18, this student moved down one reading level.

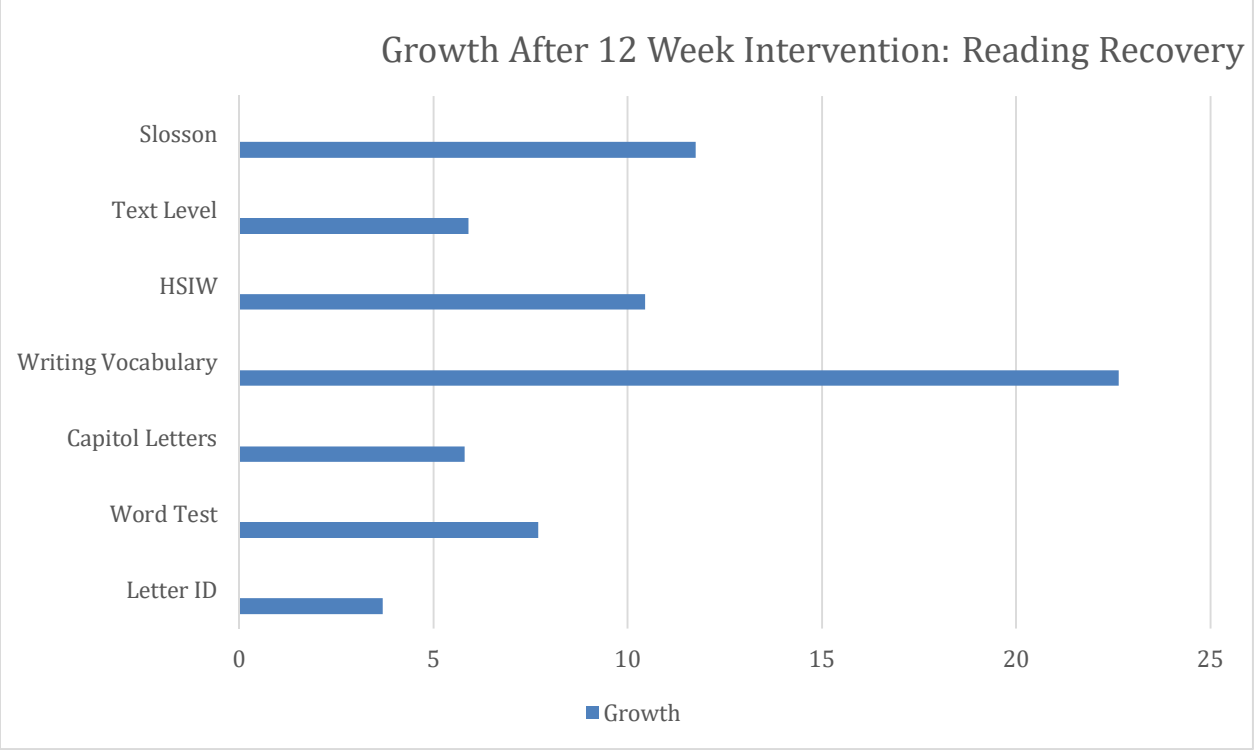


Figure 2. Overall growth of reading behaviors using emerging literacy survey for 12 week reading recovery intervention student sample.

Qualitative Measurement - Reading Recovery

The qualitative measure of effectiveness for Reading Recovery was implemented using a Teacher Perception Survey/Likert Scale. As outlined in Appendix G, 100% of first-grade teachers surveyed had a positive perception of the effectiveness of Reading Recovery on student's reading fluency. Sixty percent of first-grade teachers had a positive perception of Reading Recovery's impact on student's reading comprehension. One hundred percent of teachers surveyed felt Reading Recovery had a positive impact on student's confidence toward reading. Only 20% of teachers surveyed felt Reading Recovery had a positive impact on student's writing ability. Here are some opinions expressed by First Grade Teachers at Highland Elementary School about the Reading Recovery Program: "I think this is a great program. It has helped my student tremendously." "Students are definitely more confident, but don't always apply what they learn in RR in the class" (Reading Recovery Teacher Perception Survey, 2019; see Appendix G).

Cost Analysis-Reading Recovery

A final measure of effectiveness used was a cost analysis of the product expenses for Reading Recovery. Material costs were determined for supplies and materials needed to be purchased for three, full-time Reading Recovery teachers. It should be noted that the materials purchased for Reading Recovery can be kept and reused, they were not consumable. Each school year leveled reading books are added to each Reading Recovery teacher's resources. The Harnett district funds Reading Recovery material costs, not the home school (Pope, personal interview, 2018). The total cost for materials for three Reading Recovery teachers was $2,638.67. This total included the cost of book sets, filing cases, writing materials, book bags, magnetic letters, pocket charts, labels, sentence strips, writing journals and magnetic dry erase boards. It should also be

noted that Reading Recovery teachers deliver 1:1 instruction serving one student for approximately 30 minutes daily. It should also be noted that Reading Recovery requires specialized training and funding for personnel beyond the regular classroom teacher. As stated earlier, this study strictly looked at program material costs.

Major Finding I

Based on the CIPP Product Evaluation or Reading Recovery (RR), the outstanding conclusion is that Reading Recovery had a positive effect on first graders who received this intervention for 12 weeks. Specifically, Reading Recovery improved reading behaviors in all study participants. The highest growth was observed in writing vocabulary and slosson. Reading levels increased in both quantitative measures of effectiveness overall for study participants. The average text level increase based on the Early Literacy Survey for students who received 12 weeks of Reading Recovery intervention was six and the average reading level increase based on state assessment, mClass, was 2.6 reading levels.

Major Finding II

The second major finding was concluded from qualitative research. First grade teachers of students in this study had a positive perception of Reading Recovery's effect on student's reading fluency, reading comprehension and reading confidence. Only 20% of teachers surveyed felt Reading Recovery positively impacted their student's writing ability.

CIPP Product Evaluation for Leveled Literacy Intervention

Research Question II: Will Leveled Literacy Intervention (LLI) have a positive impact on student academic achievement in reading for first grade students enrolled in the program at Highland Elementary School for twelve weeks based on mClass assessment growth data from

beginning of year to middle of year, teacher observation using an emerging literacy rubric, and teacher perception?

Quantitative Measures of Program Effectiveness

Based on the Emerging Literacy Survey and outlined in Figure 3, twelve weeks of Leveled Literacy Intervention also had a positive impact on reading behaviors in the students under analysis. It should be noted that only five students were in the Leveled Literacy Intervention study as compared to the twenty students in the Reading Recovery Program. The reason for this was to maintain a common starting baseline. The average growth of reading behaviors is outlined in Figure 3 and Appendix D. Students experienced the highest growth in writing vocabulary and slosson, similar to the Reading Recovery Intervention results. One hundred percent of students improved in reading text levels with an average increase of five levels from beginning of year to middle of year.

The second quantitative measure of effectiveness used in this study was growth in mClass reading levels. Five students were measured for both beginning of year reading level in mClass and middle of year reading level in mClass. As outlined in Appendix E, the average growth of reading levels for students who received 12 weeks of Leveled Literacy Intervention was 2.8 reading levels from beginning of year to middle of year. The highest growth was observed in Student 22, this student moved up seven reading levels and the lowest growth was in Student 23, this student moved up one reading level.

Qualitative Measurement - Leveled Literacy Intervention (LLI)

The qualitative measure of effectiveness for Leveled Literacy Intervention was implemented using a Teacher Perception/Likert Scale survey with open-ended questions. As outlined in Appendix G, 75% of first-grade teachers surveyed had a positive perception of the

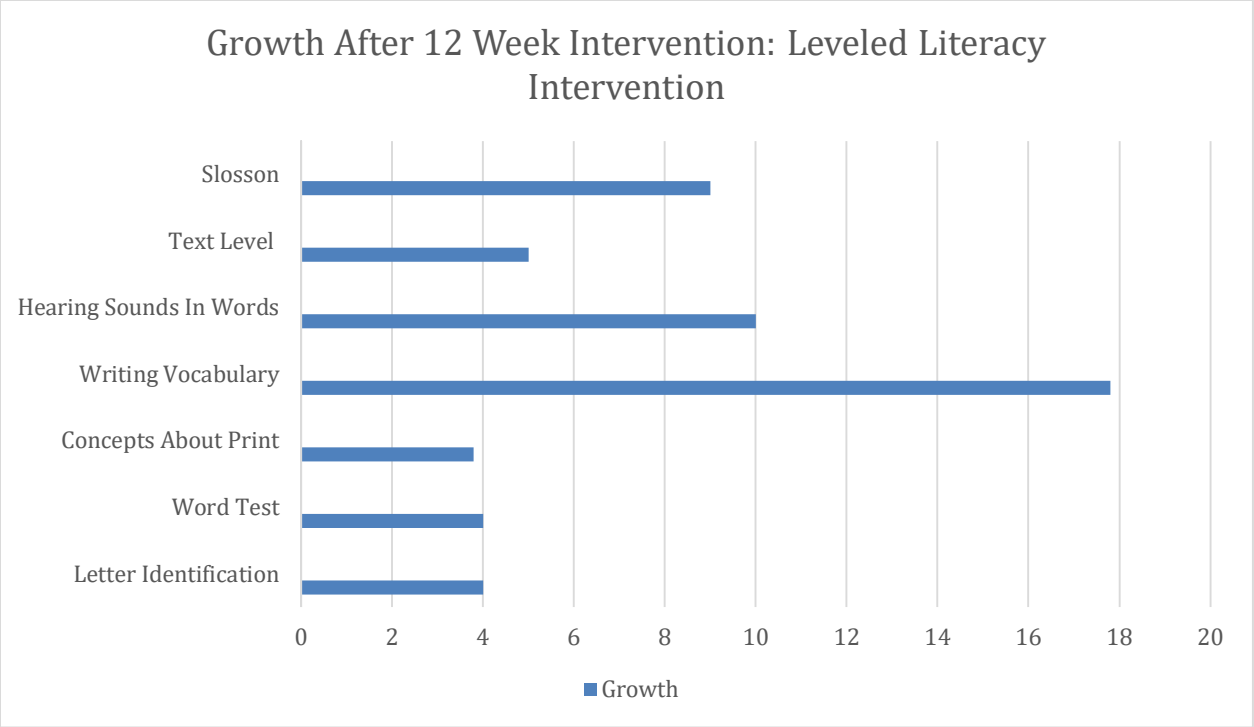


Figure 3. Reading behavior growth after 12 week intervention: Leveled Literacy Intervention.

effectiveness of Leveled Literacy Intervention on student's reading fluency. Fifty percent of first-grade teachers had a positive perception of Leveled Literacy Intervention's impact on student reading comprehension and fifty percent were neutral as to its effect on reading comprehension. Fifty percent of teachers surveyed felt Leveled Literacy Intervention had a positive impact on student's confidence toward reading and 50% were neutral as to its effect on student's confidence. Fifty percent of teachers surveyed felt LLI had a positive impact on student's writing ability, 25% were neutral and 25% did not feel LLI had a positive effect on student's writing ability. Some opinions expressed by first-grade teachers at Highland Elementary School about the Leveled Literacy Intervention Program are as follows: "Some students showed different successes." "My students who were receiving LLI did go up one reading level" (Leveled Literacy Intervention Teacher Perception Survey, 2019).

Cost Analysis of Leveled Literacy Intervention (LLI)

A final measure of effectiveness for Leveled Literacy Intervention was a cost analysis of the product expense for Leveled Literacy Intervention (LLI). Material costs were analyzed for what supplies and materials would need to be purchased for three, Leveled Literacy Instructors. It should be noted that the materials purchased for LLI could be reused, they were not consumable. Each school year leveled reading books are added to each Leveled Literacy Intervention (K-2 teachers at Highland Elementary School) teacher's resources. The Harnett district funds Leveled Literacy Intervention material costs, not the home school (Pope, personal interview, 2018). The total cost for materials for three LLI groups/teachers totaled $4,997.00. This total included the following purchases: First Grade Fountas and Pinnell Green Kit ($3,416.00), Fountas and Pinnell Leveled Literacy Intervention Grade 1 Take home book packages ($585.00), and Fountas and Pinnell Teacher Resources Green System ($996.00)

(Heinemann, 2018b). It should also be noted that Leveled Literacy Intervention can be delivered to up to six students at a time and did not require specialized training or additional personnel funding.

Major Finding I

Based on the CIPP Product Evaluation for Leveled Literacy Intervention (LLI), quantitative growth data supports that Leveled Literacy Intervention had a positive effect on first graders who received this intervention for 12 weeks. Specifically, LLI improved reading behaviors in all study participants. The highest growth was observed in writing vocabulary and slosson. Reading levels increased in both quantitative measures of effectiveness overall for study participants. The average text level increase based on the Early Literacy Survey for students who received 12 weeks of LLI intervention was five reading levels and the average reading level increase based on state assessment, mClass, was 2.8 reading levels.

Major Finding II

The second major finding was concluded largely from qualitative research. First grade teachers of students in this study had a positive perception of Leveled Literacy Intervention's effect on student's reading fluency. Feelings were mixed for first grade teachers on LLI's impact on student's reading comprehension, writing ability and reading confidence. Only half of teachers surveyed felt like LLI positively impacted reading comprehension, writing ability and reading confidence in students.

Summary of Findings

Based on the comprehensive evaluation methods used to determine effectiveness of both Reading Recovery and Leveled Literacy Intervention as early reading intervention tools for first graders, it was determined that both early reading programs positively impact students' reading

behaviors and reading levels. Reading Recovery has a more positive perception from first grade teachers on its ability to positively impact a student's reading comprehension and reading confidence. Students in both early reading intervention programs improved overall according to the Early Literacy Observation Survey and state reading assessments. More information is needed to determine both program's impact on writing ability. Finally, the cost for Leveled Literacy Intervention materials exceeds the costs for Reading Recovery. Reading Recovery serves less students at a time than Leveled Literacy Intervention and requires additional funding for personnel and specialized training.

CHAPTER 5: SUMMARYAND RECOMMENDATIONS

Summary of Findings

The review of literature clearly emphasized the need to address reading deficits in children early. There is a clear correlation between reading ability and future academic and societal success (Nemours, 2013). There is a definite need for effective early reading interventions for struggling readers, especially in children from low-income households. Studies such as the National Assessment of Educational Progress proved that there is a clear variance in reading performance and childhood poverty rates (Ladd & Fiske, 2011). National and state leaders recognize the need to implement early reading programs and assist children from poverty with reading preparedness. From the Elementary and Secondary Education Act (ESEA) of 1965 which provided federal funding to low income schools to the No Child Left Behind (NCLB) law of 2002 which established clear standards and funding for low income schools, there has been a national emphasis on helping children achieve academic success in literacy (Klein, 2015). National leaders recognize the need to put reading instructional measures in place early. Leaders also acknowledge the disadvantage students from low income homes have as compared to their more advantaged peers in regards to reading success.

The state of North Carolina went a step further by passing legislation that set early reading state expectations. North Carolina passed the Read to Achieve law as a part of the Excellent Public Schools Act of 2012 and tasked schools with assessing and identifying struggling readers early. The law specifically outlines clear reading benchmarks, interventions, and consequential steps for students in North Carolina by the end of third grade. The reading benchmark, mClass, a universal screener that measures the development of reading skills of all students in grades K-3 through two main assessments: Dynamic Indicators of Basic Early

Literacy Skills (DIBELS) and the Text Reading Comprehension (TRC) assessments, is the main test recognized by the state of North Carolina to evaluate student's reading readiness (WCPSS, 2017). The mClass assessment was also used in this study as a quantitative measure of early reading program effectiveness. This program evaluation measured program success through children's growth in mClass reading levels before and after program intervention.

Dating back to the 1800s there has been debate as to the best method to help early struggling readers. There was a distinct debate between proponents of whole language reading instruction and phonics instruction which teaches sounds associated with letters and letter combinations. Recent studies support the value of balanced literacy instruction and intervention. The National Reading Panel released meta-analysis report in 2000 which identified the following areas most impactful in reading instruction: alphabetic knowledge (phonemic awareness and phonics), fluency, comprehension, teacher education and computer technology (Langenberg et al., 2000). Literacy experts Billie J. Askew, Gay Su Pinnell, and Patricia L. Scharer (2014) emphasized the following assessment characteristics in a sound literacy program: understandable by school professionals, inclusive of baseline information about the reader, include ongoing monitoring and systematic observation of literacy behaviors, provide authentic reading and writing opportunities, provide teachers with a common path to progress language and provide teachers with a clear predictor and alignment with end of grade assessments. Askew, Pinnell and Scharer also recommend a school-home connection (Askew, Pinnell, & Scharer, 2014). Both reading intervention programs, Reading Recovery and Leveled Literacy Intervention, selected for analysis in this study included these research-based instructional characteristics.

Using the CIPP (Context, Input, Process, and Product) program evaluation model the following questions were answered about Reading Recovery and Leveled Literacy Intervention:

1. Did the program achieve its goals?
2. Did it successfully address the main needs and problems?
3. Were there any unexpected outcomes (positive and negative)?
4. Were the program's outcomes worth the cost (Stufflebeam & Zhang, 2017).

Summary of Reading Program: Reading Recovery

Reading Recovery achieved its goal of positively impacting student reading acceleration as evidenced by quantitative reading measures. Based on the Emerging Literacy Survey, reading behaviors increased in all areas for students following Reading Recovery program implementation. Most outstanding growth occurred in students' writing vocabulary and reading text level. As outlined by state benchmarks set by the North Carolina Department of Public Instruction students in first grade should meet the following milestones: students should grow from a mClass reading level of C to a level I or 6 levels from beginning of year to end of year in first grade. After the 12-week intervention of Reading Recovery, the average mClass growth for students receiving this reading program was 2.6 reading levels. At the rate of 2.6 reading levels per 12 weeks, students who received Reading Recovery are numerically on track to reach the six reading levels of growth by the end of the school year or over approximately 33 weeks from beginning of year mClass assessments to end of year mClass assessments. The acceleration in reading levels for students who received Reading Recovery support that the main needs of students in this study were met.

The qualitative teacher perception survey responses also suggest that Reading Recovery accomplished its goal of improving reading achievement in struggling first-grade readers. Teachers perceived Reading Recovery as having positive impact on student's reading confidence, reading fluency and reading comprehension. Some unexpected outcomes did come

to light. Teacher perception of Reading Recovery's positive influence on student's writing ability was low even though the Emerging Literacy Survey results show a significant increase in student's writing vocabulary. Writing vocabulary increased on average by 23 words for students in this study before and after the Reading Recovery intervention. Despite this increase, first-grade teachers had a negative perception on Reading Recovery's ability to improve student's writing ability. The cost of the program materials were worth the cost based on positive student growth of readers. More information is needed on district-wide expenses for Reading Recovery training and personnel expenditures to come to a solid conclusion on cost efficiency versus overall program effectiveness. Unlike other reading programs in the district, Reading Recovery requires highly trained personnel and additional funding beyond classroom teachers for personnel.

Recommendations - Reading Recovery

Reading Recovery proved to be an effective intervention program. The following recommendations were noted:

1. Based on study results, it is recommended that Reading Recovery teachers push into the traditional first-grade classroom environment to teach students receiving interventions application in the natural classroom environment, especially in the area of writing.
2. There is a need for increased communication between Reading Recovery teachers and First-Grade Teachers.
3. First-Grade Teachers should be a part of the Reading Recovery selection process and meet mid-way through the intervention delivery process with Reading

Recovery teachers to discuss student progress and classroom application of learned reading behaviors.

Implications: Reading Recovery

Reading Recovery proved to be an effective reading intervention program. The following implications were concluded:

1. At the organizational level, the results of this study suggest a need to evaluate personnel costs overall for Reading Recovery in the Harnett District to evaluate and maximize the cost-benefit ratio.
2. At the organizational level, the results of this study suggest a need to provide professional development for Reading Recovery teachers and traditional first-grade teachers to maximize student success and application in the regular classroom environment.
3. The results of this study indicate a positive correlation between one-on-one reading instruction and reading progress in struggling first-grade readers for twelve weeks of intervention. These results imply that intervention beyond 12 weeks would increase program effectiveness and reading achievement acceleration.
4. More information and training is needed to maximize home-school reading connections. Students were sent home take-home books but there lacked a measurement tool to assess fidelity and impact of the home reading portion of the program.

Summary of Reading Program: Leveled Literacy Intervention

Leveled Literacy Intervention achieved its goal of positively impacting student reading acceleration as evidenced by quantitative reading measures. Based on the Emerging Literacy Survey, reading behaviors increased in all areas for students following Leveled Literacy Intervention program implementation. The most significant growth occurred in students' writing vocabulary. Students averaged an increase of 5 text levels from pre and post-tests. The average mClass reading level growth for students who received LLI as a reading intervention was slightly higher than those that received Reading Recovery at 2.8 reading level increase from beginning of year to middle of year mClass benchmarks. As stated earlier, state benchmarks set by the North Carolina Department of Public Instruction students in first grade should meet the following milestones: students should grow from a mClass reading level of C to a level I or 6 levels from beginning of year to end of year. After the 12-week intervention of Leveled Literacy Intervention, the average mClass growth for students receiving LLI was 2.8 reading levels. At the rate of 2.8 reading levels per 12 weeks, students who received LLI are numerically on track to reach the six reading levels of growth by the end of the school year or over approximately 33 weeks from beginning of year mClass assessments to end of year mClass assessments. The positive growth in reading levels and reading behaviors for students who received Leveled Literacy Intervention also support that the main needs of students in this study were met.

The qualitative teacher perception survey responses positively support Leveled Literacy Intervention accomplished its goal of improving reading achievement in struggling first-grade readers. Teachers perceived Leveled Literacy Intervention as having positive impact on student's reading fluency. Surprisingly, first-grade teachers had mixed feelings about LLI's impact on student's reading comprehension, reading confidence and writing ability despite clear reading

growth in using the Emerging Literacy Survey and mClass quantitative measures which both measure reading comprehension. Another surprising finding was that first-grade teachers rated Leveled Literacy Intervention higher than Reading Recovery on the programs ability to positively impact student writing. The cost of the program materials were worth the cost based on positive student growth of readers. While the materials were slightly higher than the materials for Reading Recovery, Leveled Literacy Intervention did not require specialized training or additional personnel expenditures. Regular first-grade classroom teachers implemented Leveled Literacy Intervention in this study.

Recommendations – Leveled Literacy Intervention

Leveled Literacy Intervention proved to be an effective intervention program. The following recommendations were noted:

1. This study revealed a need for Leveled Literacy Intervention implementation training for all first-grade teachers implementing the program.
2. It is recommended that at least one Leveled Literacy Intervention material kit is assigned per three teachers to ease planning, access to books and time management.

Implications - Leveled Literacy Intervention

Leveled Literacy Intervention proved to be an effective intervention program. The following implications were concluded:

1. At the organizational level, the results of this study suggest a need to provide professional development on Leveled Literacy Intervention implementation for all first-teachers in the Harnett District at least once to maximize student success.

2. The results of this study indicate a positive correlation between small group reading instruction and reading progress in struggling first-grade readers for twelve weeks. Results indicate that program implementation beyond 12 weeks would increase program effectiveness and acceleration of student reading achievement.
3. More information and training is needed to maximize home-school reading connections. Students were sent home take-home books but there lacked a measurement tool to assess fidelity and impact of the home reading portion of the program.

Summary

Reading Recovery and Leveled Literacy Intervention programs had a positive impact on student reading progress. When looking at material costs, both programs yielded results and were cost efficient as compared to efficiency. There is a need to look more comprehensively at program expenditures versus results, especially with Reading Recovery which requires specialized training and additional personnel. There is also a need to provide thorough training for first-grade teachers on Leveled Literacy Intervention to ensure quality of implementation. It was also concluded that Reading Recovery teachers and first-grade teachers should have more opportunities to collaborate in planning literacy interventions for first-graders and to share best practices and classroom reading application skills for students. Reading Recovery and Leveled Literacy Intervention both increased reading achievement and were perceived to positively increase student reading fluency and various reading behaviors by first-grade teachers. There lacked a measurement of the impact on the home/school connections for both Reading Recovery and Leveled Literacy Intervention. Future evaluation and planning of program implementation can improve reading interventions in Harnett County Schools and maximize personnel and

reading program expenditure's impact on student reading readiness. The ultimate goal was to improve early reading intervention planning in the Harnett District to increase reading performance by at least 15% within three years. With increased communication, transparency and professional development, both Reading Recovery and Leveled Literacy Intervention have the ability to positively impact reading achievement in the Harnett district.

REFERENCES

Allyn, P., & Morrell, E. (2016). *Every child a super reader: 7 strengths to open a world of possible*. New York: Scholastic.

Annie E. Casey Foundation. (2010). Early warning! Why reading by the end of third grade matters. *Annie E. Casey Foundation*, 1–10. Retrieved from https://www.aecf.org/resources/early-warning-why-reading-by-the-end-of-third-grade-matters/

Archbald, D. (2008, January 2). Research versus problem solving for the education leadership doctoral thesis: Implications for form and function. *Educational Administration Quarterly*, 704–739.

Archibald, D. (2014). *The Gappsi Method.* Ypsilanti, Michigan: NCPEA.

Askew, B. J., Pinnell, G. S., & Scharer, P. L. (2014). *Promising Literacy for Every Child: Reading Recovery® and a Comprehensive Literacy System*. Worthington, OH: Reading Recovery Council of North America.

Blevins, W. (2019). Understanding Phonics. Retrieved from https://www.scholastic.com/teachers/articles/teaching-content/understanding-phonics/

Brooks, G., Maktari, N., Scott, K., & Williams, J. (2017). Systems change for literacy gains. *Principal*, 36–39.

Children's Literacy Foundation. (2019). Research. Retrieved from http://clifonline.org/resources/research/

Clay, M. M. (2013). *An observation survey of early literacy achievement*. Auckland, New Zealand: Marie Clay Literacy Trust.

Common Core State Standards Initiative. (2018). English language arts standards. Retrieved from http://www.corestandards.org/ELA-Literacy/

Dolly Parton's Imagination Library. (2018). Retrieved from https://imaginationlibrary.com/usa/affiliate/NCHARNETT/

Fountas, I. C., & Pinnell, G. S. (2006). *Teaching for Comprehending and Fluency*. NH: Heinneman.

Fountas, I. C., & Pinnell, G. S. (2009). *Leveled literacy intervention lesson guide*. Portsmouth, NH: Heinemann.

Fountas & Pinnell Literacy. (2018). What is leveled literacy intervention. Retrieved from http://www.fountasandpinnell.com/lli/

Graham, S., & Herbert, M. (2010). Writing to read evidence of how writing can improve reading, 1–61. Retrieved from https://researchbank.acu.edu.au/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2458&context=fea_pub

Halford/ASCD, J. (1997, September). Focusing the debate on student achievement. Retrieved from http://www.ascd.org/publications/newsletters/policy-priorities/sept97/num10/toc.aspx

Harnett County Schools Strategic Plan. (2013). Lillington, NC: HCS.

Harnett County Schools. (2018). Harnett County Schools. Retrieved from https://www.harnett.k12.nc.us/

Harnett Smart Start. (2017). NC Pre-K. Retrieved from http://harnettsmartstart.org/nc-pre-k/

Henkel, C. (2015, September 2). Latest school performance grades. Retrieved from The Progressive Pulse website http://pulse.ncpolicywatch.org/2015/09/02/latest-school-performance-grades-released-high-poverty-schools-receive-lowest-grades/#sthash.pTMoQVrR.dpbs

Heinemann. (2018a). Fountas & Pinnell Literacy: What is leveled literacy intervention? Retrieved from http://www.fountasandpinnell.com/lli/

Heinemann. (2018b). Fountas & Pinnell LLI Green, Levels A–K. Retrieved from https://www.heinemann.com/collection/lligreen

Holmes, N. (2016, September 8). State comparison data. Retrieved from Data Analytics website https://sites.google.com/a/harnett.k12.nc.us/srcsnapshots/

Holmes, N. (2017). Data Analytics. Retrieved from https://sites.google.com/a/harnett.k12.nc.us/srcsnapshots/mclass

Jenson, E. (2009). *Teaching with poverty in mind*. Danvers, MA: ASCD.

K12 Academics. (2018). History of reading instruction. Retrieved from https://www.k12academics.com/reading-education-united-states/history-reading-education-us

Klein, A. (2015). No Child Left Behind: An overview. *Education Week.*

Ladd, H. F., & Fiske, E. B. (2011, December 11). Class matters: Why won't we admit it? *New York Times*. Retrieved from http://www.nytimes.com/2011/12/12/opinion/the-unaddressed-link-between-poverty-and-education.html

Langenberg, D. N., Correro, G., Kamil, M. L., Samuels, S., Shaywitz, S. E., Williams, J., & Willows, D. (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. *National Reading Panel*. Retrieved from https://www.nichd.nih.gov/sites/default/files/publications/pubs/nrp/Documents/report.pdf

Lauer, R. H. (2010). Reading: More Than an Academic Issue. *Education Week, 29*(33). Retrieved from https://www.edweek.org/ew/articles/2010/05/21/33lauer.h29.html

NCDPI Literacy Division. (2017). NC Read to Achieve Livebinder. Retrieved from https://www.livebinders.com/play/play/850102

NCDPI. (2016). 2016 Ready Accountability Background Brief. Retrieved from http://www.ncpublicschools.org/docs/accountability/reporting/16bckgrndbrf.pdf

NC School Report Cards. (2017). Retrieved from https://ncreportcards.ondemand.sas.com/SASVisualAnalyticsViewer/VisualAnalyticsViewer_guest.jsp?reportPath=/ReportCard/NC_SRC&reportName=NC+Report+Cards

Nemours. (2013). Closing the gap for reading success in the early years.

North Carolina Public Schools. (2017, September 7). 2016–17 Performance and growth of North Carolina public schools. Executive Summary. Retrieved from http://www.ncpublicschools.org/docs/accountability/reporting/2017/documentation/exsumm17.pd

Public Schools First NC. (2016). Why A-F school performance grades? Retrieved from https://www.publicschoolsfirstnc.org/resources/fact-sheets/a-f-school-performance-grades/

Rabinovitz, J. (2016, April 29). Local education inequities across US revealed in New Stanford data set. Retrieved from Stanford News website http://news.stanford.edu/2016/04/29/local-education-inequities-across-u-s-revealed-new-stanford-data-set/

Reading Partners. (2019). The Problem We Are Tackling. Retrieved from https://readingpartners.org/the-literacy-challenge/the-problem-we-are-tackling/

Reading Recovery Council of North America. (2018). Reading Recovery Council of North America. Retrieved from https://readingrecovery.org/reading-recovery/teaching-children/basic-facts/

Reading Recovery Training Center, Clemson University. (2016a). Effectiveness. Retrieved from https://readingrecovery.clemson.edu/about/reading-recovery-effectiveness/

Reading Recovery Training Center, Clemson University. (2016b). Level 1 Sample Lesson. Retrieved from https://readingrecovery.clemson.edu/home/guided-reading-k-2/sample-lessons-by-level/level-1-sample-lesson/

Reardon, S. F. (2011, July). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations.

Stufflebeam, D. L., & Zhang, G. (2017). *The CIPP Evaluation Model*. New York, NY: The Guilford Press.

U.S. Census Bureau. (2014, December 13). Search results. Retrieved from https://www.census.gov/search-results.html?q=Harnett County North Carolina &page=1&stateGeo=none&searchtype=web&cssp=SERP&_charset_=UTF-8

U.S. Department of Education. (2004). *A guide to education and No Child Left Behind.* Retrieved from http://purl.access.gpo.gov./GPO/LPS57879

Wake County Public School System. (2017). Understanding Your Child's mClass Assessments. Retrieved from https://www.wcpss.net/Domain/9196

APPENDIX A: IRB APPROVAL

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building· Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office 252-744-2914 · Fax 252-744-2284
www.ecu.edu/ORIC/irb

Not Human Subject Research Certification

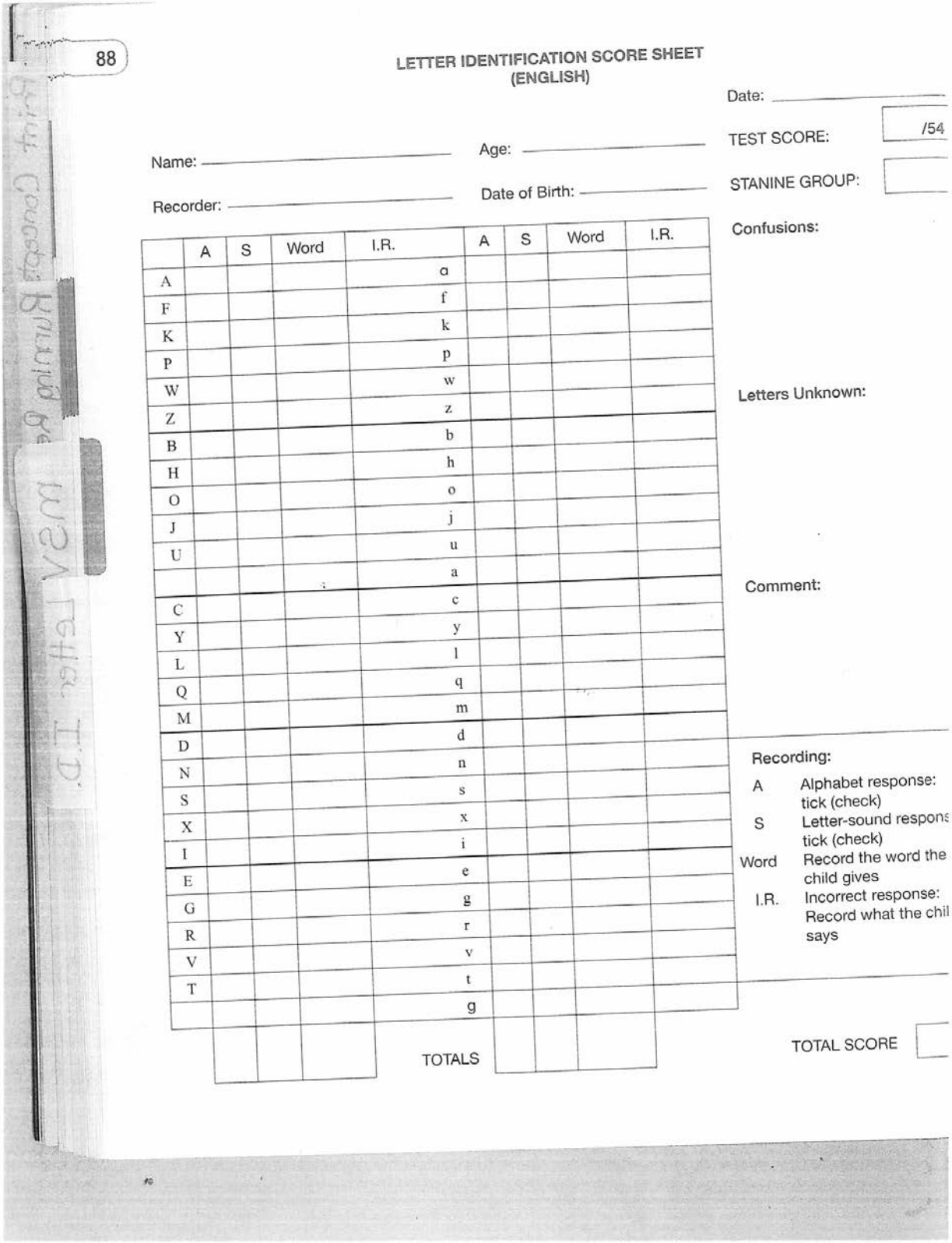
From: Social/Behavioral IRB
To: Jennifer Solvey
CC: Jim McDowelle
Date: 12/10/2018
Re: UMCIRB 18-002594
Social/Behavioral IRB

On 12/10/18, the IRB Staff reviewed your proposed research and determined that it does not meet the federal definitions of research involving human participants, as applied by East Carolina University.

Therefore, it is with this determination that you may proceed with your research activity and no further action will be required. However, if you should want to modify your research activity, you must submit notification to the IRB before amending or altering this research activity to ensure that the proposed changes do not require additional UMCIRB review.

The UMCIRB appreciates your dedication to the ethical conduct of research. It is your responsibility to ensure that this research is being conducted in accordance with University policies and procedures, the ethical principles set forth in the Belmont Report, and the ethical standards of your profession. If you have questions or require additional information, please feel free to contact the UMCIRB office at 252-744-2914.

APPENDIX B: EMERGING LITERACY SURVEY ASSESSMENTS



88

LETTER IDENTIFICATION SCORE SHEET
(ENGLISH)

Date: _____

Name: _____ Age: _____ TEST SCORE: /54

Recorder: _____ Date of Birth: _____ STANINE GROUP:

	A	S	Word	I.R.		A	S	Word	I.R.
A					a				
F					f				
K					k				
P					p				
W					w				
Z					z				
B					b				
H					h				
O					o				
J					j				
U					u				
					a				
C					c				
Y					y				
L					l				
Q					q				
M					m				
D					d				
N					n				
S					s				
X					x				
I					i				
E					e				
G					g				
R					r				
V					v				
T					t				
					g				
				TOTALS					

Confusions:

Letters Unknown:

Comment:

Recording:

A Alphabet response: tick (check)

S Letter-sound respons tick (check)

Word Record the word the child gives

I.R. Incorrect response: Record what the chil says

TOTAL SCORE

Use pg. 160.

Stanine scores

To compare the child's performance with that of other children use one of the tables of scores below. In this book each task has four age tables. Select the table which will allow you to compare the child's score with those of other children of his age (see page 126). Look up the total raw score obtained by the child you assessed on the age table that is right for him and read from the second line of boxes his scaled score, a number between 1 and 9. This scaled score is called a stanine and it provides a guide to how well the child compares with a sample of 796 New Zealand children in February 2000. If the score on the table is allocated across more than one stanine group choose the lowest value: that is, be conservative rather than generous.

WRITING VOCABULARY STANINES FOR FOUR AGE GROUPS

Writing Vocabulary: 5.00 – 5.50 years

(N = 223; Score Range: 0–130; Mean = 12.9; SE = 0.89; SD = 13.4)

Test Score	0	1	2–3	4–6	7–11	12–18	19–32	33–48	49+
Stanine Grp	1	2	3	4	5	6	7	8	9

Writing Vocabulary: 5.51 – 6.00 years

(N = 170; Score Range: 0–130; Mean = 23.8; SE = 1.33; SD = 17.4)

Test Score	0–2	3–5	6–8	9–15	16–26	27–37	38–48	49–58	59+
Stanine Grp	1	2	3	4	5	6	7	8	9

Writing Vocabulary: 6.01 – 6.50 years

(N = 230; Score Range: 0–130; Mean = 42.7; SE = 1.51; SD = 22.9)

Test Score	0–4	5–13	14–25	26–36	37–49	50–59	60–69	70–83	84+
Stanine Grp	1	2	3	4	5	6	7	8	9

Writing Vocabulary: 6.51 – 7.00 years

(N = 173; Score Range: 0–130; Mean = 51.0; SE = 1.69; SD = 22.3)

Test Score	0–8	9–25	26–35	36–45	46–56	57–66	67–80	81–99	100+
Stanine Grp	1	2	3	4	5	6	7	8	9

(For more technical information see Appendices.)

Immediately preceding the summary of the Observation Survey results (Chapter 10, pages 126–128), readers will find a general discussion of stanine scores, why they are used, when they are helpful and what their limitations are. (See pages 155–160 for stanine scores for Canada, the United Kingdom and the United States.)

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OBSERVATION SURVEY SUMMARY SHEET

Name: _____ Date: _____ D. of B.: _____ Age: ____ yrs ____ mths

School: _____ Recorder: _____

Text Titles	Errors / Running Words	Error Ratio	Accuracy Rate	Self-correction Ratio
Easy _____	_____	1: _____	_____ %	1: _____
Instructional _____	_____	1: _____	_____ %	1: _____
Hard _____	_____	1: _____	_____ %	1: _____

Directional movement _____

Analysis of Errors and Self-corrections
Information used or neglected [Meaning (M), Structure or Syntax (S), Visual (V)]

Easy _____

Instructional _____

Hard _____

Cross-checking on information (Note that this behaviour changes over time)

		Raw Score	Stanine
How the reading sounds	Easy Instructional Hard		
Letter Identi-fication			
Concepts About Print	* Sand Stones Shoes Moon		
Word Reading	* List A List B List C Other _____ (Enter test name)		
Writing Vocabulary			
Hearing and Recording Sounds in Words	* A B C D E		
Other tasks	Writing sample Story		

* Circle whatever was used

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- [ ] *Sand*
- [ ] *Stones*
- [ ] *Moon*
- [ ] *Shoes*

CONCEPTS ABOUT PRINT SCORE SHEET

Date: _____

Name: _____ Age: _____ TEST SCORE: /24

Recorder: _____ Date of Birth: _____ STANINE GROUP:

PAGE	SCORE	ITEM	COMMENT
Cover		1. Front of book	
2/3		2. Print contains message	
4/5 4/5 4/5 4/5		3. Where to start 4. Which way to go 5. Return sweep to left 6. Word-by-word matching	
6		7. First and last concept	
7		8. Bottom of picture	
8/9		9. Begins 'The' (*Sand*) Begins 'I' (*Stones*) Begins 'I' (*Moon*) Begins 'Leaves' (*Shoes*) bottom line, then top, OR turns book	
10/11		10. Line order altered	
12/13 12/13 12/13		11. Left page before right 12. One change in word order 13. One change in letter order	
14/15 14/15		14. One change in letter order 15. Meaning of a question mark	
16/17 16/17 16/17 16/17		16. Meaning of full stop (period) 17. Meaning of comma 18. Meaning of quotation marks 19. Locate: m h (*Sand*); t b (*Stones*); m i (*Moon*); m i (*Shoes*)	
18/19		20. Reversible words 'was', 'no'	
20 20 20 20		21. One letter: two letters 22. One word: two words 23. First and last letter of word 24. Capital letter	

APPENDIX C: EMERGING LITERACY BEHAVIOR SURVEY SCORES

PRE-POST INTERVENTION

Intervention	Pre/Post Status	Student	Letter ID (54)	Word Test (20)	CAP (24)	Writing Vocab	HSIW (37)	Text Level	SIson	Anecdotal Notes
Reading Recovery	Pre Score	1	52	9	15	26	32	3	11	
Reading Recovery	Post Score	1	54	18	19	42	36	10	33	
Reading Recovery	Pre Score	2	51	1	14	21	33	2	5	
Reading Recovery	Post Score	2	51	15	18	41	35	10	27	
Reading Recovery	Pre Score	3	47	11	11	20	28	5	15	
Reading Recovery	Post Score	3	54	17	18	41	33	14	21	
Reading Recovery	Pre Score	4	52	1	10	11	16	2	5	
Reading Recovery	Post Score	4	50	8	15	31	29	4	11	Moved 12.18.18
Reading Recovery	Pre Score	5	46	6	8	4	26	1	5	
Reading Recovery	Post Score	5	49	12	13	26	32	8	22	Moved 11.21.18
Reading Recovery	Pre Score	6	46	6	12	17	33	3	9	
Reading Recovery	Post Score	6	51	17	15	53	36	7	24	
Reading Recovery	Pre Score	7	48	6	11	19	21	0	8	
Reading Recovery	Post Score	7	52	11	15	32	29	3	15	
Reading Recovery	Pre Score	8	49	2	15	16	29	0	4	
Reading Recovery	Post Score	8	53	14	17	39	30	7	26	
Reading Recovery	Pre Score	9	42	6	12	19	25	2	8	
Reading Recovery	Post Score	9	51	16	17	35	33	6	24	
Reading Recovery	Pre Score	10	49	3	12	11	22	3	7	
Reading Recovery	Post Score	10	51	13	19	45	36	7	17	
Reading Recovery	Pre Score	11	47	3	3	6	4	0	3	
Reading Recovery	Post Score	11	48	9	13	27	28	5	13	Moved 12.12.18

Reading Recovery	Pre Score	12	48	2	10	10	25	0	3	
Reading Recovery	Post Score	12	51	13	19	45	35	8	17	
Reading Recovery	Pre Score	13	47	2	14	8	21	0	5	
Reading Recovery	Post Score	13	54	14	18	44	35	7	20	
Reading Recovery	Pre Score	14	51	6	13	6	19	0	12	
Reading Recovery	Post Score	14	52	10	18	38	24	5	19	
Reading Recovery	Pre Score	15	54	11	12	27	29	2	19	
Reading Recovery	Post Score	15	54	16	21	36	34	8	24	
Reading Recovery	Pre Score	16	47	4	11	12	19	1	4	
Reading Recovery	Post Score	16	51	9	17	42	35	5	20	
Reading Recovery	Pre Score	17	37	0	9	3	6	0	0	
Reading Recovery	Post Score	17	52	1	13	9	19	2	3	Moved to SCMC EC 12.17.18
Reading Recovery	Pre Score	18	51	5	14	6	21	0	7	
Reading Recovery	Post Score	18	52	11	16	39	36	6	16	
Reading Recovery	Pre Score	19	44	4	9	14	21	2	8	
Reading Recovery	Post Score	19	50	10	16	38	34	5	11	
Reading Recovery	Pre Score	20	49	7	11	12	14	3	15	
Reading Recovery	Post Score	20	51	15	19	48	36	10	23	
Intervention	**Pre/Post Status**	**Student**	**Letter ID (54)**	**Word Test (20)**	**CAP (24)**	**Writing Vocab**	**HSIW (37)**	**Text Level**	**Slosson**	**Anecdotal Notes**
Leveled Literacy Intervention	Pre Score	21	53	15	10	27	34	3	19	
Leveled Literacy Intervention	Post Score	21	54	17	18	46	35	12	35	
Leveled Literacy Intervention	Pre Score	22	51	6	10	16	18	1	9	
Leveled Literacy Intervention	Post Score	22	53	10	15	29	31	5	20	
Leveled Literacy Intervention	Pre Score	23	42	2	12	7	15	0	7	
Leveled Literacy Intervention	Post Score	23	51	8	12	23	30	3	14	
Leveled Literacy Intervention	Pre Score	24	53	6	12	11	21	2	6	
Leveled Literacy Intervention	Post Score	24	52	8	13	28	29	5	14	ESL
Leveled Literacy Intervention	Pre Score	25	43	5	11	16	23	2	8	
Leveled Literacy Intervention	Post Score	25	52	9	16	40	36	8	11	

APPENDIX D: EMERGING LITERACY BEHAVIOR GROWTH OF STUDENTS

AFTER 12 WEEK READING INTERVENTIONS

Intervention	Student	Letter ID (54)	Word Test (20)	CAP (24)	Writing Vocab	HSIW (37)	Text Level	Slosson
Reading Recovery	1	2	9	4	16	4	7	22
Reading Recovery	2	0	14	4	20	2	8	22
Reading Recovery	3	7	6	7	21	5	9	6
Reading Recovery	4	-2	7	5	20	13	2	6
Reading Recovery	5	3	6	5	22	14	7	17
Reading Recovery	6	5	11	3	36	3	4	15
Reading Recovery	7	4	5	4	13	8	3	9
Reading Recovery	8	4	5	2	23	1	7	22
Reading Recovery	9	9	12	5	16	8	4	16
Reading Recovery	10	2	10	7	34	14	4	10
Reading Recovery	11	1	10	10	21	24	5	10
Reading Recovery	12	3	6	9	5	10	8	14
Reading Recovery	13	7	11	4	36	14	7	15
Reading Recovery	14	1	12	5	32	5	5	7
Reading Recovery	15	0	4	9	9	5	6	5
Reading Recovery	16	4	5	6	30	16	14	16
Reading Recovery	17	15	1	4	6	13	2	3
Reading Recovery	18	1	6	2	33	15	6	9
Reading Recovery	19	6	6	13	24	13	3	3
Reading Recovery	20	2	8	8	36	22	7	8
Average Growth	**n/a**	**3.7**	**7.7**	**5.8**	**22.65**	**10.45**	**5.9**	**11.75**
Leveled Literacy Intervention	21	1	2	8	19	1	9	16
Leveled Literacy Intervention	22	2	4	5	13	13	4	11
Leveled Literacy Intervention	23	9	6	0	16	15	3	7
Leveled Literacy Intervention	24	-1	4	1	17	8	3	8
Leveled Literacy Intervention	25	9	4	5	24	13	6	3
Average Growth	**n/a**	**4**	**4**	**3.8**	**17.8**	**10**	**5**	**9**

APPENDIX E: MCLASS GROWTH OF STUDENTS RECEIVING READING INTERVENTIONS

Intervention	Student	BOY mClass	MOY mClass	Growth
Reading Recovery	1	RB	D	4
Reading Recovery	2	B	E	3
Reading Recovery	3	B	B	0
Reading Recovery	4	RB	B	2
Reading Recovery	5	RB	D	4
Reading Recovery	6	RB	C	3
Reading Recovery	7	B	E	3
Reading Recovery	8	A	E	4
Reading Recovery	9	RB	B	2
Reading Recovery	10	RB	E	5
Reading Recovery	12	A	C	2
Reading Recovery	14	B	C	1
Reading Recovery	15	RB	B	2
Reading Recovery	16	RB	E	5
Reading Recovery	18	B	A	-1
Reading Recovery	19	RB	A	1
Reading Recovery	20	RB	D	4
Reading Recovery	11	moved		**2.588235294**
Reading Recovery	13	moved		
Reading Recovery	17	moved		
Average Growth	**n/a**			
Intervention	**Student**	**BOY mClass**	**MOY mClass**	**Growth**
Leveled Literacy Intervention	21	RB	B	2
Leveled Literacy Intervention	22	RB	G	7
Leveled Literacy Intervention	23	B	C	1
Leveled Literacy Intervention	24	RB	B	2
Leveled Literacy Intervention	25	RB	C	2
Average Growth	**n/a**			**2.8**

APPENDIX F: INTERVENTION STUDENT ATTENDANCE

Intervention	Student	Days Present out of 60
Reading Recovery	1	60
Reading Recovery	2	58
Reading Recovery	3	60
Reading Recovery	4	56
Reading Recovery	5	55
Reading Recovery	6	56
Reading Recovery	7	53
Reading Recovery	8	54
Reading Recovery	9	60
Reading Recovery	10	59
Reading Recovery	11	52
Reading Recovery	12	59
Reading Recovery	13	57
Reading Recovery	14	57
Reading Recovery	15	57
Reading Recovery	16	52
Reading Recovery	17	53
Reading Recovery	18	56
Reading Recovery	19	59
Reading Recovery	20	57
Average Growth	**n/a**	**56.5**
Intervention	**Student**	
Leveled Literacy Intervention	21	53
Leveled Literacy Intervention	22	56
Leveled Literacy Intervention	23	49
Leveled Literacy Intervention	24	58
Leveled Literacy Intervention	25	60
Average Growth	**n/a**	**55.2**

APPENDIX G: TEACHER PERCEPTION SURVEY: READING RECOVERY

Reading Recovery Teacher Perception Survey

This is an anonymous survey for teachers of students who received 12 weeks of Leveled Literacy Intervention. The purpose is to obtain teacher perception on the reading program's effectiveness.

* Required

1. **Reading Recovery had a positive impact on my student/s' reading fluency.** *
   Mark only one oval.
   - ◯ Strongly disagree
   - ◯ Disagree
   - ◯ Neutral
   - ◯ Agree
   - ◯ Strongly agree

2. **Reading Recovery had a positive impact on my student/s' reading comprehension.** *
   Mark only one oval.
   - ◯ Strongly disagree
   - ◯ Disagree
   - ◯ Neutral
   - ◯ Agree
   - ◯ Strongly agree

3. **Reading Recovery had a positive impact on my student/s' confidence as a reader.** *
   Mark only one oval.
   - ◯ Strongly disagree
   - ◯ Disagree
   - ◯ Neutral
   - ◯ Agree
   - ◯ Strongly agree

4. **Reading Recovery had a positive impact on my student/s' writing ability.** *
   Mark only one oval.
   - ◯ Strongly disagree
   - ◯ Disagree
   - ◯ Neutral
   - ◯ Agree
   - ◯ Strongly agree

5. **Comments about the program** *

APPENDIX H: TEACHER PERCEPTION SURVEY:

LEVELED LITERACY INTERVENTION

Leveled Literacy Intervention Teacher Perception Survey

This is an anonymous survey for teachers of students who received 12 weeks of Leveled Literacy Intervention. The purpose is to obtain teacher perception on the reading program's effectiveness.

* Required

1. **Leveled Literacy Intervention had a positive impact on my student/s' reading fluency.** *
Mark only one oval.
- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

2. **Leveled Literacy Intervention had a positive impact on my student/s' reading comprehension.** *
Mark only one oval.
- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

3. **Leveled Literacy Intervention had a positive impact on my student/s' confidence as a reader.** *
Mark only one oval.
- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

4. **Leveled Literacy Intervention had a positive impact on my student/s' writing ability.** *
Mark only one oval.
- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

5. **Comments about the program** *