Effects of Looping, Kindergarten to First Grade, and Performance on State Reading Tests in Third, Fourth, and Fifth Grades: A Case Study

Angela R. Belcher

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Committee:

John C. Gillham, Ed.D.
Chair, Dissertation Committee

John Cindric, Ed.D.
Committee Member

Ted Haselman, Ed.D.
Committee Member

Abstract

Early literacy continues to be a concern for society and policy makers. While looping studies exist, most are not recent. This study examined if looping from kindergarten to first grade improved students' state scores after the loop ended, focusing on English Language Arts (ELA) results. The study compared students' scores in relation to their participation in the looping program or in a traditional classroom. The participants in this study included 315 third-grade students, 183 fourth-grade students, and 105 fifth-grade students. Student test results were analyzed for significance using both t-tests and chi-Square tests and six teachers completed a survey. Looping students earned a higher percentage on ELA test results on all spring tests except for the 2013-2014 cohort's spring results for both fourth grade and fifth grade. While significance existed at various points for each cohort, the 2014-2015 kindergarten cohort was the only group found to consistently display significant results on both the t-test and chi-square test; fall third grade ELA, spring third grade ELA, and spring fourth grade ELA test results. The fact that looping students earned higher scores than non-looping students may be of interest to a school district because value-added scores and district report card results are directly tied to student achievement and the related performance category for a student's results.

Keywords: looping, reading achievement, state test

Dedication

I would like to dedicate this dissertation first and foremost to my husband Erik, who completed each step with me and was a constant support; to my parents Ed and Rita Schwab, who always believed in me as I entered a new adventure, and to my brother Rocco who always expected me to complete this dissertation process— never a question of “if”, but “when”; finally, to my children Evan, Bryce, Blaine, Aricka, and Averie, who were patient with the time commitment necessary to complete this project, and for their understanding.

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Chapter I: Introduction

Background of the Problem

Students today face a combination of demands unlike those faced by their predecessors. At one time, students were only expected to learn reading, writing, and arithmetic; however, the number of academic and non-academic requirements that policy makers have added to school curriculums have increased substantially in the past decade (Vollmer, 2010). Vollmer reports that the number of mandates that have been added to education requirements are almost impossible to meet during the school year. Since the beginning of the 1900s, more than 85 additional requirements have been added to the responsibility of school personnel, without any change in the length of the school year (Vollmer, 2010). Today, accountability in the classroom is evidenced by high-stakes testing found in kindergarten through the twelfth grade, in addition to an ever-increasing list of unfunded mandates that are handed down from the state and federal government.

School district expectations have also steadily changed. Kindergarten and first grade were historically play-based programs, but they now contain elements critical to a student's academic mission and success. Research reveals that students who do not read at grade level by the end of third grade are four times more likely to not graduate high school than students who do read at grade level by the end of third grade (Hernandez, 2012). The United States Census Bureau's American Community Survey (Alliance for Excellent Education, 2012) reports that students who dropped out of high school earn less than their educated peers and have an increased chance of going to prison. In the United States, high school dropouts commit roughly 75% of crimes and they make up 67% of inmates in America's state prisons, 56% of federal inmates, and 69% of prisoners in local jails (Alliance for Excellent Education, 2012). This data

establishes the importance of measuring early literacy skills by the third-grade level, and it illustrates the impact that adult literacy can have on society as a whole.

Federal and State laws have revised the way in which schools determine reading achievement. With the implementation of the Common Core Standards, and Ohio's Learning Standards, higher expectations have been placed on reading achievement in the primary grades. This is especially true of the competency of students to read independently (automatic decoding, fluency, and satisfactory comprehension) by the end of third grade (Casbergue, 2017). By the time students take the Ohio State mandated English Language Arts (ELA) assessment, they must be able to read passages and give evidence-based responses, verify sources, and write extended responses citing information. With basic literacy skills being expanded, educators need to identify what creates readiness for formal schooling and how it can be achieved within schools (Casbergue, 2017).

Reading proficiently by the end of third grade is a pivotal standard in a student's education. Additionally, the correlation between first grade reading skills, reading on level by the end of third grade and greater life outcomes is significant. "Up until the end of third grade, most children are *learning to read*. Beginning in fourth grade, however, they are *reading to learn*" (Annie E. Casey Foundation, 2010), making that third-grade year a critical benchmark for students and their reading ability. After third grade, students use their reading skills to gain more information, solve problems, and to think critically about the world around them. About 50% of the written fourth-grade curriculum is unintelligible to students who read below that grade level (Annie E. Casey Foundation, 2010).

According to the U.S. Department of Education, one in four eighth-grade students cannot understand grade-level reading material. In addition, 66% of students who cannot read

proficiently by the end of fourth grade end up in jail or on welfare (National Center for Education Statistics, 2003). This tendency results in students struggling and sometimes failing to graduate high school. Low literacy rates also affect society in other ways. Approximately 75% of individuals who receive food stamps achieve in the lowest two literacy levels, while 90% of welfare recipients did not graduate high school (National Center for Education Statistics, 2003). Without a high school diploma, a student's options for employment become limited.

Student readiness expectations have undergone a significant shift during the past decade, even in the primary grades, with an increased focus on higher standards, more accountability, and successful high-stakes testing (Bassok et al., 2015). Every child enters school with a wide range of experiences and pre-reading skills. Any gap in such experiences, including pre-reading skills, frequently creates a discrepancy in the pace at which students learn. The skills required for learning to read are heavily embedded in kindergarten and first-grade curriculum standards. By the second grade, curriculum standards require that students focus on fluency (the speed at which a student reads) and comprehension (understanding what is read) (Ohio Department of Education [ODE], 2015). Reading skills acquired in kindergarten and first grade are the foundation for the development of reading strategies. Specifically, phonemic awareness and alphabetic understanding that are necessary for learning early foundational reading skills in kindergarten and first grade (Coyne & Harn, 2006).

In the United States, 44 million adults cannot read a simple story to their children, and 50% are unable to read a book written at the eighth-grade level (The Literacy Project, 2017). While many attempts have been made to increase student literacy in schools over the years, the most recent is the ODE's Third Grade Reading Guarantee (TGRG). The TGRG was established by state legislation as a part of state testing requirements directed at improving student literacy

and students' ability to read grade level material. This law attempts to address the researched connection between low literacy rates and future success (ODE, 2015). Ohio's TGRG requires third-grade students attending public schools and charter schools to achieve a mandatory promotion score on the state reading assessment (part of the ELA assessment) before they can be promoted to fourth grade (ODE, 2015). Students may have multiple opportunities to achieve the promotion score, but they must meet it before being promoted to fourth grade. Students who do not meet the promotion score are retained in grade three, at a minimum in reading.

The way in which schools measure reading achievement changes as often as new federal and state laws determine; in other words, how reading is taught and measured changes frequently, in the search for an approach and assessment that fits all students. One study presented a historical reflection on gender and literacy, examining what is learned through literacy in the early childhood classroom and implications for the teaching of literacy. Society presumes that all individuals should reach a basic level in reading and writing and that it is not acceptable to have low-level literacy skills (Levy, 2016). Having sufficient reading skills provides an individual with the power of self-determination. Levy (2016) suggests that, while teaching students according to the curriculum, it is critical that early childhood educators also show children a broad, dynamic concept of literacy and that students learn their own construction of reading. Early childhood educators should focus on all forms of texts to provide students with a foundation for reading (Levy, 2016).

Ohio's TGRG is a legislative mandate (beginning with the 2013-2014 school year) used to identify students from kindergarten through third grade who are behind in reading; not reading at their current grade level. The TGRG requires school districts to assess all students in kindergarten through third grade and to report diagnostic results that specify whether the student

is on track, or not on track, with reading progress. On track is defined by a student reading at grade level, e.g., a first-grade student who can read material that is at a first-grade reading level (ODE, 2015). In kindergarten, first, and second grade, students are required to take a research-based, state-approved, reading diagnostic assessment at the beginning of each school year to measure each student's current reading level. Students' reading level results are derived from their performance on a research-based assessment and are measured using preset proficiency scores, as approved by the Ohio Department of Education. This diagnostic assessment must be given by September 30th of the current school year and all scores must be reported to ODE. The goal is for students to read at grade level by third grade (being able to read, at a minimum, third-grade material); by so doing they would be considered on track.

Student diagnostic assessment results are reported to the state. Results identify each student as being on track or not on track. Students who are not on track in reading must have a Reading Improvement and Monitoring Plan (RIMP) written, implemented, and monitored, which outlines the targeted reading interventions each student will receive in an effort to place the student back on track in reading. Such interventions may include the following components of reading: fluency, vocabulary, and phonemic awareness, and can be implemented in small groups or through individual tutoring. Students are assessed again, or benchmarked, in the middle and at the end of the school year to measure progress. The diagnostic assessment given at the end of the school year must again be reported to ODE. Results at the end of the school year determine whether students are performing on track or not on track in reading (ODE, 2015), in the same way that the results at the beginning of the school year were reported. These reading results for kindergarten through third grade are reflected on each district's local report card from ODE in the form of an early literacy grade.

Many factors have been demonstrated to improve reading scores, besides classroom instruction. For example, school districts have been built on the development of relationships between students and teachers, which may be linked with improved reading scores (Cistone & Shneyderman, 2004). Robert Steiner, founder of the Waldorf Schools in Germany in the early 1900s, believed that students would benefit from staying with the same teacher over time; therefore, students in Waldorf Schools continued with the same teacher, or looped, from kindergarten through eighth grade. The one-room schoolhouse mimicked this, as students remained with the same teacher for several consecutive school years as well. Today, over 90 countries have Waldorf Schools and practice classroom looping as their primary instructional approach (Cistone & Shneyderman, 2004).

Developing a teacher–student relationship has generally been considered a cornerstone of successful schools. According to Hattie's 15-year research project, which ranked 11 out of 138 influences that Hattie identified as impactful to student learning, "the effect size for teacher and student relationships was 0.72" (Hattie, 2009). Hattie's updated research, which ranked 75 out of 252 influences, shows that teacher and student relationships have an effect size of 0.52 \ (Hattie, 2018). Staying together two years or longer increases the bonding and trust that students and teachers develop (Grant et al., 1996). Looping, the practice of keeping the same cohort of students with the same teacher for an extended period, may be associated with improved teacher–student relationships by providing students and teachers more time together to strengthen the teacher–student bond. According to Pianta and LaParo (2003), looping enhanced the relationships that children had with the school and provided the foundation for future academic success.

Students become familiar with school processes and relationships in kindergarten, and they begin developing the pre-reading skills necessary for academic study. Sink et al. (2007) found that first grade is typically more ritualized than kindergarten is, and it has structured learning routines. Few consistent and effective transition practices are applied widely within school districts, even though studies have found that the transition from kindergarten to first grade is stressful and challenging for students (Sink et al., 2007).

"Billions of dollars are spent on education and, it seems, several billion more criticizing it. Are there no bright lights on the horizon of education reform?" (Capp & Elliott, 2003). Looping, the idea of remaining with a group of students over several grades, is not a new idea. Teaching a looping class provides teachers more time with students, making the second year of the loop a time when teaching and learning can start the first day of the new school year because the class already has previously developed rules and relationships. Typically, on day one of a new school year the students need to learn about one another and their expectations of the classroom. This is not the case when the same cohort of students stays with the same teacher.

Students from a looping classroom may not as apprehensive about starting the next school year, because they are familiar with their classmates and teacher. A typical progression from one grade level to the next is a new teacher and new classmates, each school year (Lacina-Gifford, 2001). Looping allows for academic teaching to begin immediately during the second year of the loop, instead of the "get to know you" phase. A significant amount of time at the start of a new school year is dedicated to the students and teacher getting to know one another. Teachers spend a lot of time understanding individual student behaviors, academic level, background information, strengths, weaknesses, preferences, and so on, in an effort to meet each learner's specific needs.

Student motivation is critical to academic performance and achievement, as well as future success (Wilson & Trainin, 2001). Students' motivation can be improved or undermined by their relationship with the teacher. Studies show that students as young as six years old will internalize negative messages from interactions with their teacher, which then affects the students' sense of self and lowers their self-esteem (Doumen et al., 2011). This underscores the importance of the teacher–student relationship, as identified by Hattie (2009, 2018).

In a study of hundreds of first- through fifth-grade students, emotionally warm, sensitive teachers had students who made better progress with math and reading skills (Pianta et al., 2008). In a study of 827 first-grade classrooms in 32 states, the students of compassionate teachers were often found to interact positively with peers and exhibit fewer undesirable behaviors (National Institute of Child Health and Human Development Early Child Care Research Network, 2002). Klem and Connell (2004) linked student engagement to better attendance and higher test scores. Having a compassionate teacher is likely to positively affect attendance, test scores, math, reading capability, as well as behaviors. When teachers form positive bonds with students, a stable classroom is created, which offers the potential for greater student engagement, both academically and socially (Hamre & Pianta, 2001).

A decade ago, detailed the increased expectations of kindergarten students and how significantly kindergarten curriculum and standards changed in the United States over the previous years (Bassok et al., 2015). The study focused on changes in kindergarten over 12 years and studied how public kindergarten practices changed from 1998 to 2010. The study examined whether kindergarten had become the new first grade and whether the changes in the kindergarten experience over the previous 12 years were different in schools with a high

proportion of students who were eligible for free or reduced schooling or non-White students (Bassok et al., 2015).

The study used data from two kindergarten cohorts of the Early Childhood Longitudinal Study (ECLS-K:1998 and ECLKS-K:2011), which included surveys of parents, teachers, and school administrators as well as student assessment data. Schools were first sampled from groups of counties, then students were sampled within schools. Data from 1998 included over 21,000 students in the sample, and data from 2010 included over 18,000 students (Bassok et al., 2015).

The teacher sample was limited to public school teachers. The final sample included approximately 2,500 kindergarten teachers from public schools in 1998 and 2700 teachers in 2010 (Bassok et al., 2015). The teacher surveys covered five areas: teachers' views about school readiness, curricular focus and time use, classroom materials, pedagogical approach, and assessment practices (Bassok et al., 2015). The varieties of literacy and math activities that teachers used in their classroom were examined (from independent to hands-on-activities). Also included was the percentage of teachers who reported having physical education or recess daily, as this allowed opportunities for students to engage in active movement and play. Finally, teachers were questioned on how important they considered a variety of factors to be when assessing students (from effort to performance on mandated state standards).

As a result of increased expectations, there was a substantial increase in promoting reading instruction, which coincided with a decrease in the number of rotations of activities that were independent and focused on the arts and sciences (learning centers). (Bassok et al., 2015). Student-selected activities decreased by 14% and whole-class instruction more than doubled. In 2010, kindergarten classrooms spent more time on preparing for and administering standardized tests than first-grade teachers did in 1998 (Bassok et al., 2015). Increased expectations and

curriculum standards placed greater academic pressure on kindergarten and first-grade students. Of kindergarten and first-grade teachers surveyed, 20% said students' performance on state or local standards is a serious concern for them when teaching (Bassok et al., 2015). In 1998, 19% of teachers reported that knowing the letters of the alphabet was essential, while in 2010 48% reported the same. A 33% increase was found in the number of teachers who believed it was important to know how to use a pencil. In recent years, kindergarten classrooms have come to resemble the typical first-grade classrooms of the late nineties. These classrooms have moved away from art, music, and science to an increased focus on academics and assessment.

The findings indicate that kindergartners are now under intense pressure to meet academic standards that were once part of the first- and/or second-grade curriculum (Bassok et al., 2015). The study also found a significant difference in kindergarten teachers' beliefs and practices based on demographics. Schools serving low-income non-White students generally reported a high focus on academic and informative instruction. In 2010, the difference with regard to demographics still existed.

It is not clear how much the large changes documented in this study have impacted children's development. Existing evidence is conflicting; while some evidence supports an intensified focus on academic instruction to improve children's learning and decrease gaps, other studies propose that a focus on early academic content is unnecessary and may be harmful. Findings suggest a shift toward more challenging literacy and math content, but with a drop in time spent on art, music, science, and child-selected activities.

Rationale and Significance

Public schools are responsible for educating all students; they cannot select which students they will accept or enroll. While schools continually strive to find an all-encompassing

approach to meeting students' needs, there is no singular solution for improving student learning. Educators must develop innovative methods to educate unique student learners in an ever-changing society. One of the most pressing issues in schools is student literacy; a student's ability to read fluently and comprehend what was read.

Kindergarten and first grade are vital years in which students learn foundational reading skills. Teaching reading by means of phonics instruction and decoding is rooted in Ohio's kindergarten and first-grade standards. For example, kindergarten students must know and apply grade-level phonics, decode words, understand letter and sound relationships and long and short vowel sounds, be able to read high frequency words, and distinguish between similarly spelled words. In the first grade, the same instructional expectations and student outcomes more than double.

By the second grade, curriculum standards require students to focus on fluency and comprehension in order to meet grade level expectations. However, unless students know how to decode words (from first and second grade), it is difficult, if not impossible, to read fluently, which directly relates to comprehension. A study conducted by Alvarez-Cannizo et al. (2015). investigated the role of fluency in students' text comprehension, and they identified which aspects of reading fluency are related to reading comprehension. Results of the study indicated that students with lower reading comprehension skills made a greater number of incorrect pauses and mistakes in content words. Results reinforced that reading comprehension problems are related to poor reading fluency (Alvarez-Canizo et al., 2015).

The current study investigated looping as an approach that can be implemented in an effort to meet basic reading expectations by third grade. The study may be significant for practicing teachers and administrators, as it could provide a feasible solution for literacy issues

facing schools. The solution could prove cost effective, require minimal professional development and little disruption to a school environment.

Purpose of Study

The purpose of the study was to determine whether looping from kindergarten to first grade is associated with students' reading achievement. This study investigated whether looping students outperformed non-looping students on English Language Arts (ELA) state assessments in grades three, four, and five. This study examined students' state assessment results for ELA achievement beyond the two-year loop from kindergarten to first grade, and the possible impact that looping has on sustained student performance. Finally, this study examined teacher feedback on the difference between students' overall performance, academic and behavioral, when comparing looping students to non-looping students.

This study reviewed student achievement in reading by comparing students who participated in a looping class from kindergarten to first grade with students who participated in a non-looping classroom. The study used students' state ELA test results from a rural Northwest Ohio school district. To determine if looping had an impact on ELA scores and reading capability through the sixth grade, this study investigated the following four questions:

Research Questions

1. Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the first administration (fall of third grade) of the English Language Arts state test than non-looping students?
2. Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the second administration (spring of third grade) of the English Language Arts state test than non-looping students?

3. Do students who participated in looping from kindergarten to first grade outperform non-looping students on the English Language Arts state test in grades three, four, and five?
4. Do second through sixth-grade teachers observe a difference in classroom performance between students who looped and their non-looping peers, based on completed teacher surveys?

Definition of Terms

Looping. Also known as continuous learning, continuous progress, persisting groups, multi-year grouping, and teacher/student progression, looping, according to Grant, author of *The Looping Handbook,* is the "practice of keeping groups of students together for two or more years with the same teacher" (Office of Educational Research and Improvement, 1997).

Properly Certified or Licensed. Teachers who teach in core academic subject areas (English, language arts, reading, science, math, arts, foreign language, government and civics, history, economics, and geography) must be fully licensed in the area they teach (ODE, 2018).

TGRG. Ohio's Third Grade Reading Guarantee is a program that identifies students from kindergarten through grade three who are behind in reading. Schools will provide help and support to ensure that students are on track for reading success by the end of third grade (ODE, 2015).

Early Literacy. Measured by literacy skills in the primary grades that the National Early Literacy Panel found to be most important for the later development of literacy skills include phonemic awareness, phonics, vocabulary, comprehension, and fluency (National Institute for Literacy, 2009).

Reading Achievement. This is the ability to interpret written symbols and understand printed material (Johnson, 2017). An approved reading diagnostic measure will determine a grade level equivalent (e.g., 3.4 means third grade, fourth month).

Fluency. The ability to recognize words easily, read with greater speed, accuracy, and expression, and better understand what is read is fluency (National Institute for Literacy, 2009). Fluency score is measured by the number of words a student reads per minute (e.g., a third grader may read 100 words per minute).

Comprehension. Comprehension is the reason for reading. It is an understanding of what is being read (National Institute for Literacy, 2009). After students read a passage, their comprehension can be measured by the number of words they can use to accurately retell what was read.

Student Motivation. Motivation to learn is characterized by long-term, quality involvement in learning and commitment to the process of learning (Ames, 1990).

Subjectivity and Researcher Positionality

When I began my dissertation I was the building principal of the school that initiated looping as a case study. However, the data for my study is from a district where I was the director of student services. The data was analyzed objectively using t-tests and chi-square tests to compare the scores between looping and non-looping students on the state ELA assessment. The survey data that was collected was solicited after I left the district, and from teachers who were not under my direct supervision.

Chapter II: Literature Review

Introduction

This study investigated students' ELA achievement after they completed a two-year loop with the same cohort of students and the same teacher. The purpose of this study was to determine whether looping from kindergarten to first grade improved student test results, an indication of student achievement, as measured by Ohio's ELA assessment. This study examined students' reading achievement beyond the two-year loop, in grades three, four and five, and the influence that looping had on student performance, using teacher feedback from a voluntary teacher survey.

Reading Instruction and Achievement

There are many instructional factors that influence reading achievement. Abbot et al. (2002) researched why, with regard to programs that are implemented in schools a year or two after initial training, there is no evidence such programs ever existed, they were abandoned. Specifically, the authors wanted to explore how phonemic awareness research and intervention was successfully implemented over a three-year period. While phonemic research began in the 1970s, teachers in this study did not have information on phonemic awareness and its implication for instruction. Kindergarten teachers were given activities to implement, but struggled because of lack of training.

Research methods were reformulated to be used as step-by-step procedures in the classroom with teacher input (Abbot et al., 2002); a commercial program *Making Words* was used, along with a group of lessons that focused on phonemic awareness. Students received this instruction two to three times a week for eight weeks. Over the eight weeks, students showed a mean gain of 41%. This led to teachers' requesting training to be able to implement the

intervention during the next school year. Tools were needed to measure progress, so the researchers used Dynamic Indicators Basic Early Literacy Skills (DIBELS is a vendor assessment), and created a fidelity checklist that was used by teachers to ensure consistency. DIBELS measures early phonics skills required for reading. Teachers used the checklist to guide and improve the efficiency of the implementation of phonemic awareness activities. In the study, 39 students received classroom phonemic-awareness instruction and were then identified as high, medium, or low based on the DIBELS results. Of the 39 students monitored, 27 (69%) qualified for inclusion in the study (parent permission was given, English was not a second language, and students were long-term residents of the school district). A small group of six students was randomly chosen to progress monitor each month (one left during the study, leaving five in the group) (Abbot et al., 2002). Kindergarten teachers implemented phonemic awareness lessons during class activities twice a week for 30 minutes. Students in the low group met with the teacher four days a week, medium students met with the teacher twice a week, and high students met only once a week with the teacher.

During the following year, first-grade teachers continued to express a need for phonemic awareness activities to build student reading skills. A pre/posttest assessment was developed, and 11 students received researcher-created lessons two to three times a week for eight weeks. The lessons were expanded by the authors, and during the next year both first-grade teachers implemented the program, which included 45 first-grade students in two classrooms (Abbot et al., 2002).

All students made progress in phonemic segmentation (Abbot et al., 2002). The three sub skills needed to measure growth in phonics skills were onset recognition fluency or beginning sounds, letter recognition fluency, and phonemic segmentation. A limitation of the study was the

strong effect outside forces such as administrative support had on how strategies were implemented and continued to be used in the classroom.

Reading achievement and corrective action for struggling readers have always been important for improved literacy. McIntyre et al. (2006) researched phonics and the reading achievement of struggling readers in the primary grades through qualitative data collection and analysis of specific instructional practices. Classes in the study used six different reading programs: Breakthrough to Literacy, Early Success, Early Intervention, 4-Blocks, SRA Reading Mastery, or Together We Can.

The study included 117 at-risk readers in 14 schools across 42 classrooms. Principals recommended teachers who were successful at implementing the instruction model for a year to participate in the study. Of the teachers suggested, 84% had taught in their current position for more than five years (McIntyre et al., 2006). Teachers identified the lowest achieving 20% of their students in October, then two to five students from each classroom were chosen to participate in the testing of phonics application and reading skills. These students were monitored from the beginning of first grade until the end of second grade. Students were supported by a single reading mode (one of the previously mentioned reading programs). A second group of students was monitored from the beginning of second grade until the end of third grade. This group participated in the same reading model across the two years.

Students were pre- and post-tested in first grade on phonics application, and students in first and second grade were pre and post-tested using a reading inventory (pretests took place in September and posttests took place in May during each of the two years of the study). Researchers did not find that any one of the early intervention models was more effective at helping first-grade struggling readers with phonics achievement (McIntyre et al., 2006). Instead,

they found that teacher practices made the largest difference in reading achievement. This suggested that education should focus on teacher practices specific to student needs. Programs alone are not enough to ensure student success in meeting state grade level standards. The influence of the teacher and the established relationships teachers have with students have the potential to positively affect reading achievement (McIntyre et al., 2006).

Limitations of the study included infrequent observations due to the number of teachers and schools included in the study. Furthermore, since the study focused on struggling readers, only two to five students per classroom were included, and individual teacher effects were therefore difficult to measure (McIntyre et al., 2006).

Juel (1988) conducted a longitudinal study of 54 students from first through fourth grades to determine whether the same students remain poor readers and writers, year after year, and what factors prevent students from improving. In addition, Juel aimed to determine whether a student would remain a poor reader at the end of fourth grade if the student were a poor reader at the end of first grade.

The study followed students enrolled in one elementary school with a high-minority, low-socioeconomic population. Several assessment measures were administered over the years, including a phonemic awareness test, the Iowa Test of Basic Skills, a spelling and writing subtest, an intelligence test (IQ), and an attitude assessment towards reading. Evidence from the study indicated that students who were poor readers in first grade usually stayed poor readers at the end of fourth grade. Poor readers started first grade with minimal phonemic awareness. While poor readers made worthwhile gains in phonemic awareness in first grade, they were unable to attain the maximum score on the phonemic awareness test until the end of third grade (good readers had reached the same level by the end of first grade).

A primary factor that prevented the poor readers from improving was their poor decoding skills. By the end of fourth grade, these students still had not achieved the decoding level that good readers had achieved by the end of second grade. These results emphasize the importance of kindergarten and first-grade reading instruction, specifically phonics.

A qualitative study conducted by Gallant (2013) examined first-grade teachers' ratings of students' language and literacy performance on a standards-based assessment to predict students' English Language Arts and math performance on a third-grade standards-based criterion-referenced test (Gallant, 2013). The study examined the predictive nature of teacher ratings with the state's accountability system.

The sample included 4,292 elementary school students cross-classified by 131 first grade and 137 third-grade schools attended. A cluster random sample of 27 school districts from the southeastern part of the United States was included in the study, with student assessment records consisting of first-grade teacher ratings and third-grade achievement scores. The existing data files that were merged included first-grade teacher ratings on personal and social development, language and literacy, and mathematical thinking domains of a standards-based, curriculum-embedded performance assessment (spring 2002); third-grade scale scores on the English Language Arts and mathematics subscales of a standards-based, criterion-referenced test administered (spring 2004); student demographic variables; and school and district codes (Gallant, 2013).

Teachers' ratings of the students used a low-stakes, standards-based, curriculum-embedded performance assessment based on the Work Sampling System. Using the developmental guidelines and checklists for each domain, teachers observed and rated students' performance on the language and literacy and mathematical thinking indicators; ratings included

not yet, in process, and proficient. The third-grade achievement tests consisted of untimed high-stakes standards-based criterion-referenced assessments administered to students in grade three through a statewide assessment program. The tests assessed mathematics and English Language Arts using multiple-choice and constructed-response items in the spring of an academic year (Gallant, 2013).

Gallant (2013) hypothesized that the selected school-level demographic variables influenced student achievement because of school structure (K-2, K-3, and K-5). About 23% of students did not attend the same elementary school for first and third grades. Results showed a positive significant association between first-grade teacher ratings and students' third-grade performance in mathematics and English Language Arts when dividing the between-classroom and the within-classroom variances. Controlling for student and school demographic variables, the results support the use of teacher ratings to predict students' later achievement (Gallant, 2013). Overall, positive associations were seen between first-grade performance assessment domain scores and third-grade achievement scale scores.

A limitation of the study is that it did not account for situations in which students may have attended different schools at the two time points. Also, the review approach of the study made it impossible to determine what interventions were provided to students in the second grade based on first-grade ratings on the performance assessment (Gallant, 2013). It was also unknown whether schools had adopted any special reading or mathematics programs for third-grade students during the academic year and prior to the spring administration of the achievement tests.

One study examined teacher-based judgment accuracy related to reading achievement in kindergarten through third grade and used data from the National Center for Education Statistics

(NCES) Early Childhood Longitudinal Study, Kindergarten Class 1998-1999 (ECKLS-K) public use data file (Valdez, 2013). The data set included a nationally representative sample of kindergarten students from public and private schools in 1998. The same students were monitored during the spring of 2002 as most progressed through third grade. The sample consisted of 22,782 students enrolled in 1,277 schools during the 1998-1999 school year (Valdez, 2013). Students who repeated kindergarten, were in special education, or had limited English proficiency were excluded, along with students who changed schools from kindergarten through third grade, or students who did not participate in all four data points included in the study.

The Language/Literacy portion of the Academic Rating scale was used for the teacher judgement component. The questionnaire asked teachers to rate students on a 5-point Likert scale (not yet, beginning, in-progress, intermediate, and proficient) to measure language and literacy, math, and general knowledge. The criterion reading measure used the Item-Response Theory-based scale of scores of the ECLS-K reading assessment, which included measures of basic literacy, vocabulary, and reading comprehension (Valdez, 2013).

Teacher judgment of kindergarten students' language and literacy skills was fairly predictive of reading performance in first and third grade (Valdez, 2013). The study found a small significant effect for socioeconomic status and the relationship between teacher judgment of language/literacy and the measurement of student reading skills using a standardized reading criterion test.

Socioeconomic status (SES) may be a predominant variable that could possibly affect the teacher's judgment of a student's performance. Also, the teacher's years of experience may affect the teacher's judgment on a student's performance. Other teacher variables, for example,

skillfulness at accurately observing student behavior could explain the comparable relationship between teacher literacy judgments and direct reading assessment. According to Valdez (2013) future studies should investigate teacher characteristics as variables that might influence the teacher's judgment of student performance and the student's actual performance.

Research conducted by Musu-Gillette (2015) examined the frequency of reading instruction opposed to overall reading instruction. Research questions included: how do students' approaches to learning relate to reading achievement in the spring of kindergarten, and how does this vary across schools; how do the frequency of reading activities in the classroom (half or full day) and school-level demographics affect student's reading achievement in the spring of kindergarten; and how do frequency of reading activated in the classroom (half or full day) and school level demographics affect the variation in the relationship between children's approaches to learning and children's reading achievement in the spring? (Musu-Gillette, 2015).

The study contained data from the 1998-1999 Early Childhood Longitudinal Study, Kindergarten Cohort (ECLS-K), which included assessments from the fall and spring of kindergarten. The subsample of the ECLS-K, students with complete data for both testing points, included 3,034 students from 184 schools (Musu-Gillette, 2015); however; the data from 16 schools were lost when data was imported, which occurred because of individual missing data on the frequency of reading activities.

The average teacher-rated approaches to learning were associated with higher kindergarten reading achievement scores in the spring (Musu-Gillette, 2015). Higher socio-economic status, higher fall reading achievement, and a longer gap between fall and spring testing were also associated with higher spring reading achievement. The study identified differences in spring reading achievement across schools, even when individual demographic

characteristics were controlled for. Adding class and school-level factors, the between-school discrepancy in spring reading achievement emphasizes the importance of considering student-level, classroom-level, and school-level characteristics that affect student learning (Musu-Gillette, 2015). Teachers' instructional practices, evaluated in relation to time spent on reading activities, predicted students' spring reading achievement, while other demographic factors did not. This finding illustrates how essential quality instruction is to student achievement. The teaching practices that kindergarten teachers use may strengthen the relationship between approaches to learning and achievement (Musu-Gillette, 2015). Classrooms associated with a high-level instructional climate included more teacher–student interactions and fewer teacher-directed activities, which resulted in higher gains in reading achievement.

There are several limitations to this study (Musu-Gillette, 2015), including the frequency of reading activities in the classroom, which only accounted for the number of times certain concepts were taught (not the depth). Further research is needed to understand why teachers choose to engage in certain instructional activities and not others. The ECLS-K was designed to be a nationally representative sample of kindergarten students in the United States. However, because of the missing data, several schools from the sample were not included, therefore the results are not representative of the kindergarten population as a whole. Additionally, the students who attended the schools in the final sample were slightly more socioeconomically disadvantaged compared to the full sample.

Japel (2007) conducted a study on the three important elements of school readiness and later achievement: school-entry academic skills, school-entry attention skills, and school-entry socioemotional skills. The study was a mixed methods study that included analysis of six longitudinal data sets and interviews.

The sample in Japel's study included 1,756 children whose academic achievement was tracked from age 7-8 to age 13-14 and whose achievement and behavior was assessed at age 5-6. The sample contained students who were aged 5 or 6 in 1986, 1988, 1990, or 1992. The achievement and behavior of the 13 to 14-year-olds was assessed with interviews in 1994, 1996, 1998, and 2000. Attention and socioemotional behaviors were collected based on mothers' reports, teachers' reports, and observation.

The strongest predictors of later achievement were school-entry math, reading, and attention skills (Japel, 2007). Results showed that early math skills are most predictive, then reading skills and lastly attention skills. Math and reading skills at the start of a student's academic career were found to consistently be connected with increased academic performance in future grades, and statistically significant predictors of later reading and math achievement (Japel, 2007).

Limitations of the study according to Japel (2007) included variance, reporter bias, over control, restricted range, and the fact that measurement reliability cannot account for the difference of predictive influence of school-entry achievement and socioemotional measures. A student's socioemotional and/or problem behaviors could affect other students' achievement more than their own achievement. Problem behaviors could interfere with classroom activities so much so that obedient children become more off task and less engaged (Japel, 2007).

Morris et al. (2003) investigated kindergarten pre-reading skills that would predict reading achievement by the end of first and second grade, and at which time during kindergarten the skills would have the most predictive potential. At the beginning, middle, and end of the year, six predictor tasks were administered to 102 kindergarten students (with parent permission) from four rural schools in North Carolina. The six tasks measured included: alphabet

recognition, beginning consonant awareness, concept of word in text, spelling with the beginning and ending consonants, phoneme segmentation, and word recognition. Overall assessments were administered five times (three times during the kindergarten year and then in May of second grade and in May of third grade). Test administrators were trained prior to the first testing to ensure standardization of administration. Each kindergarten teacher had ten or more years of teaching experience (Morris et al., 2003).

Morris et al. (2003) found that alphabet recognition, concept of word in text, spelling with beginning and ending consonants, and word recognition effectively predicted success in first-grade reading. By the middle of kindergarten, effective prediction of first and second grade reading achievement could be made. Limitations of the study were that kindergarten reading and writing included invented spelling, not explicit spelling instruction. In addition, the sample included rural, lower-middle socioeconomic status students, with the majority of students having no preschool experience.

Students entering kindergarten today (half or full day) are expected to have already learned what used to be taught during the typical first-grade year a decade ago. As of 2014, about 95% of five- and six-year-olds in the United States were enrolled in school, which indicates that most kindergarten-aged students have been affected by the rising academic standards (D'Agostino & Rodgers, 2017).

Researchers investigated the overall change in literacy achievement for low achieving students (D'Agostino & Rodgers, 2017). Their study used a random sample of students who entered first grade between 2002 and 2013. Data from the six OSELA (*An Observation Survey of Early Literacy Achievement)* tasks were included. Trends in the achievement gap on each OSELA task between low achieving students and the random sample of students from 2002 to

2013 were included. Literacy achievement was analyzed from a Reading Recovery data base (only achievement data at the entry to first grade before any interventions began). Data analysis began with the 2002-2003 cohort from schools that were in the database, each year over the 12 years, so that the sample was consistent. A total of 2,358 schools from 44 states were included (D'Agostino & Rodgers, 2017). The total sample included 364,738 students at the start of first grade (313,488 that were identified as low achieving, and 51, 250 as a random sample). Demographic data was comparable over the 12 years.

The OSELA includes six literacy tasks and meets the reliability, validity, classification accuracy, generalizability, and technical standard to identify children at risk of failure (D'Agostino & Rodgers, 2017). The skills are early achievement measures such as letter identification and letter knowledge. On all six OSELA tasks, both the low achieving students and the random sample improved test score averages at entry to first grade. The most significant improvement for both the low achieving and random sample students was found on the hearing and recording sounds in words task.

Trend data showed a significant gap change on all six tasks. The study found a narrowing of the literacy achievement gap over the 12-year period between the low achieving and random sample groups on four OSELA tasks: letter identification, phoneme awareness (HRSW), concepts about print, and writing vocabulary. This might indicate that pre-first-grade instruction which focused on item knowledge (e.g., phonemic awareness and letter identification) was more beneficial for low achieving students. Overall, beginning of first-grade reading achievement for both low achieving and typically achieving students noticeably improved over 2002-2013, and provides support for the growing academic focus in the early grades.

Limitations of the study include a lack of data base information on the 2,358 schools with respect to the instructional emphases. Over six different assessments were accounted for over 12 years in the sample without any specific instructional program, which led the researcher to conclude that a range of classroom instructional approaches were involved.

Teacher–Student Relationships

The independent variable of this study was whether or not a student who looped with the same group of students and teacher for more than one year demonstrated improved reading achievement, following the framework of Bowlby and Ainsworth (Bretherton, 1992). Bowlby formulated the theory, while Ainsworth made it possible to test some of the ideas and expand the theory itself. Both theorists were influenced by Freud, who stated that a child's strong emotional or physical attachment to a caregiver is critical to its development. The school is most children's first social system outside of the family where children may form strong attachment-like relationships with other adults, primarily teachers. Attachment influences students' school success (Bergin & Bergin, 2009). Secure attachment is associated with both higher grades and standardized test scores, when compared to insecure attachment. In this time of accountability, improving the teacher–student relationship is necessary to increase student success. Understanding how attachment in the classroom may enable teachers make more progress with students. "Attachment influences school success through two routes: indirectly through attachment to parents, and directly through attachment to teachers and schools." (Bergin & Bergin, 2009). In classrooms, attachment to teachers and the school provides a feeling of security for students, which allows them to explore freely and forms the basis for sociable children.

Many factors contribute to overall literacy rates in society, one such being relationships in schools. Student and teacher relationships continue to be studied to investigate their impact on

student engagement and learning. Using a longitudinal data set collected by the Institute for Research and Reform in Education to validate the Research Assessment Package for Schools (RAPS), Klem and Connell (2004) found teacher support to be essential to increase student engagement in school.

Data was collected by surveying students and parents, teachers, school records, and quality of school reform implementation as a part of RAPS measures. Student records and survey data were taken from studies in six elementary schools and three middle schools. Researchers measured engagement from the perspective of students and teachers using surveys completed on a 4-point Likert-type scale (not at all true, not very true, sort of true, very true). Students who perceived teachers as compassionate within an organized classroom and had clear, fair expectations reported being more engaged in school (Klem & Connell, 2004). Findings indicate that students and teachers identify the value and significance of the teacher–student relationship to student engagement in school.

Palacios's (2007) study used the Early Childhood Longitudinal Study-Kindergarten Cohort to examine how teachers' relationships with students and students' peer relationships affect children's short- and long-term reading achievement during the elementary years. The first-grade sample included 16,604 children with 5,029 teachers, the third-grade sample included 14,281 children and 6,023 teachers, and the fifth-grade sample included 11,233 children and 4,734 teachers. Information was collected from students, parents, and teachers in the spring of first, third, and fifth grade. Reading was assessed first, and students were given a common set of guiding questions of varying difficulty (difficulty of subsequent questions was determined by student answers). Item Response Theory (IRT) scale scores were used: a pattern of right, wrong, or skipped responses was used to compare scores, since students did not all receive the same

reading questions (Palacios, 2007). The IRT also made it possible to research longitudinal measurement of achievement.

Classroom characteristics were assessed using four constant variables created to describe the percentage of students eligible for free lunch, were classified as gifted, were identified with a disability, or who were limited English proficient (Palacios, 2007). Additionally, teachers' time allocation for instructional activities, type of instructional activity, and use of achievement groups for reading were assessed. Reading and writing scales of instructional activities were created to assess teachers' orientation toward different types of instructional activities. Most teachers reported using teacher-directed, whole-class activities for an hour or more in first and third grade, but by fifth grade only 50% of teachers reported the same. Time per week spent in reading achievement groups did not appear to be associated with reading achievement in first grade, but by fifth grade more time spent in achievement groups for reading was associated with lower reading achievement.

Prior teacher and classroom quality had a small influence on children's reading achievement. Children's previous teacher and classroom experiences were associated with approximately 5% to 10% of variability in reading achievement associated with student-level factors. Across all samples, students' previous teacher and classroom experiences were associated with a small long-term influence on children's reading achievement.

The main limitation associated with Palacios's study (2017) is the quality of the measures. An additional limitation is the use of teacher reports within a survey design. The measures of coexisting teacher and classroom quality were developed from teacher reports only and cannot be corroborated through another reporter or from direct observation (Palacios, 2017).

Stephanou (2014) evaluated "the role of kindergarten children's feelings about the perceived quality of their relationships with their teachers and their emotions towards their teachers." Further evaluated was how this impacted children's belief in their capabilities and learning motivation related to performance in mathematics and literacy. The quality of student–teacher interpersonal relationships is critical for students' emotional experience at school (Stephanou, 2014).

Kindergarten children from various socioeconomic levels, totaling 200 and aged from 68 to 75 months (108 girls, 92 boys), and 30 teachers (one to 25 years' experience) participated in this study. The participants came from 30 classrooms of 26 different kindergartens from central and western Greece. Teachers and children were from the same classes, with six or seven children from each class participating.

The Feeling About School (FAS) scale (Valeski & Stipek, 2001) was used to determine children's feelings about their relationships with their teachers and their perceptions of ability in mathematics and literacy. The smallest bar was placed at point 1 on the scale, with the three remaining bars leading up to the largest bar which was placed at point 5 on the scale. The questions were read aloud to the children and they were told to point to the bar that represented their answer (Stephanou, 2014). Children's school subject learning motivation was assessed by their responding to four items for each school subject. The wording of the questions for the two school subjects was the same, except for the subject title. Children were introduced to and familiarized with the interviewers, and their anonymity and confidentiality was ensured. Interviewers had familiarized the children with the scales to ensure that they understood how to use the scales to answer. The children were interviewed individually during a regular lesson in their classroom.

Descriptive statistics showed that the kindergarten students who experienced moderate to very positive feelings about their relationship with their teacher felt moderate to very positive emotions towards their teacher, and they had moderate to high competence beliefs in literacy and mathematics (Stephanou, 2014).

Stephanou (2014) determined that "the more positive the children's emotions towards their teachers and the more positive their feelings about their relationship with their teachers, the more positively they rated their competence, learning goals, and intrinsic interest in mathematics and literacy." How students felt about their teachers was more strongly associated with how they felt about their ability than with their learning motivation in literacy, with the opposite true for mathematics.

Compassionate teacher–student relationships are an essential factor to create and maintain a sense of community that supports academic gains. Research in public schools has increased the focus on supportive relationships and how teachers affect student outcomes. Student achievement, specifically at school entry, and measures of the teacher and student relationship quality are highly correlated (Mason et al., 2017).

Mason et al. (2017) investigated the correlations between the teacher–student relationship quality and student achievement to determine the associations between quality of the teacher rated closeness or conflict with students and the effect on reading and math gains. Data from the National Institute on Child Health and Human Development Study of Early Child Care and Youth Development was used. The sample included data collected in three phases, from birth through fifth grade, and data from first, third, and fifth grade was analyzed. The measures used for teacher–student relationship quality were from Pianta's (1992) Teacher–Student Relationship Scale using observed responses as indicators of the underlying hidden variable of conflict (i.e.,

"This child and I always seem to be struggling with each other") and closeness (i.e., "Child openly shares feelings and experiences with me") (Mason et al., 2017).

Closeness was measured using eight items from the teacher closeness subscale of the teacher–student relationship scale, which used a 5-point Likert-type scale, with 1 being definitely does not apply and 5 being definitely applies. Conflict was measured using the seven items from the Teacher Conflict Subscale of the Teacher–Student Relationship Scale (using the same 5-point Likert-type format). Academic achievement was measured using the Woodcock-Johnson Revised Test of Achievement (Mason et al., 2017).

Teacher–student conflict predicted longitudinal changes in later math achievement across all points measured, but closeness did not predict later math or reading achievement at any point. The achievement variables were measured using a standardized achievement battery instead of classroom grades. Reading achievement at first grade and third grade predicted reading and math achievement at grade three and grade five, but there were no statistically significant correlations from reading achievement to closeness or conflict at any subsequent time point.

A limitation includes the sample mainly consisting of low risk European Americans (Mason et al., 2017). In addition, the academic skills measured by the Applied Problems and Letter–Word Identification subtests differed in complexity and were collected as single subtests (not broad math and reading achievement). There may be differences in measurement across groups when considering composite versus subtest achievement scores.

Teacher–student relationships have a significant effect on student learning, according to Hattie's research, which spanned fifteen years and synthesized over 800 meta-analyses from studies on millions of students on the influences on student achievement in school-aged students (Hattie, 2009). Hattie identified factors that have the most and least significant impact on

learning. The particular finding which influences this study is that "the effect size for teacher and student relationships was 0.72," which ranks it 11th out of 138 in Hattie's identified influences (Hattie, 2009). Hattie's updated research (2018) showed teacher and student relationships with an effect size of 0.52, which is 75th out of 252 influences (Hattie, 2018). This influence suggests that a teacher–student relationship significantly affects academic success within the school year, and school personnel may need to prioritize how they address this impact within the classroom.

Student academic success improves in supportive and nurturing environments, according to Perry et al. (2007). In classrooms where more supportive practices were documented, the number of students in class who met the letter-sound recognition, reading fluency, and math standards increased. Perry et al. (2007) investigated the effects of teaching practices that provided social and cognitive instruction support on first-grade students' academic, behavioral, and social emotional regulation.

The sample included 14 first-grade teachers with 257 students from four rural elementary schools. Students' academic skills were assessed using locally developed achievement tests that measured letter recognition, letter-sound recognition, and reading fluency. The Pupil Behavior Ratings Scale measured 11 behavior attributes that were combined into three subscales: classroom adaption, interpersonal behavior, and intrapersonal behavior. Each test had a standardized scripted set of directions for test administration according to which teachers and aides were trained for reliability purposes (Perry et al., 2007). The 257 students were assessed in the fall and spring, and a sub-sample of 154 students were personally interviewed in the spring by trained doctoral students.

The Early Childhood Classroom Observation Measure (ECCOM) was used to describe the degree to which instructional and social teacher practices were intellectual and supportive.

These traits were assessed using a 14-item rating scale that reflected child-centered practices in preschool through second grade, forming three subscales: instructional, social, and motivational levels. In the fall, trained observers spent half a day in each classroom and completed the rating scale using a 5-point scale: 1-practices are rarely seen (0–20% of the time), 2-practices are sometimes seen (20–40% of the time), 3-practices are often seen (40–60% of the time), 4-practices are quite often seen (60–80% of the time), 5-practices predominate (80–100% of the time) (Perry et al., 2007). Correlational analyses showed teacher practices were linked to the percentage of students in class who met the letter-sound recognition, reading fluency, and math standards. In classrooms with more supportive teacher practices, students exhibited more positive interpersonal behavior and lower intrapersonal problems. Student self-perception was linked to teacher practices and students ended the year with higher academic skills (Perry et al., 2007).

Limitations included a restricted ability to completely investigate teacher practices as predictors of achievement. Also found was limited consistency on reading skill variables, especially for the letter knowledge and letter sound knowledge assessed in the spring. Finally, information about children came mainly for their teachers.

Roorda et al. (2017) conducted a meta-analysis that focused on the affective quality of teacher–student relationships, engagement, and achievement. Studies from the previous five years were included, and comparisons between primary and secondary school studies were made. The study used data from a previous meta-analysis (Roorda et al., 2001) in addition to a new research. From the previous meta-analysis conducted, 16 articles (83 studies) still met the criteria for the current research. The final sample included 179 articles (189 studies) with 249,198 students from 1990–2016 (Roorda et al., 2017).

The study showed that engagement played a main role in explaining the link between teacher–student relationships and achievement, independent of students' age. Student engagement can be seen as a significant factor in the association between the affective quality of teacher–student relationships and students' academic achievement (Roorda et al., 2017). Relationship quality was both directly and indirectly correlated with achievement, and appeared to continue over time. With regard to school practice, this meta-analysis highlighted the importance of primary teachers being aware of the impact of the affective relationships with students. The positive impact of close teacher–student relationships suggests that it is worthwhile to invest as much time and effort as possible into developing these positive relationships.

In another study, researchers Ponitz, Rimm-Kaufman, Grimm, and Curby (2009) theorized that the daily teacher–student interactions and students' engagement in the classroom represent a vital thread that connects school inputs (e.g., a reading curriculum) with student outputs (e.g., reading achievement). The researchers hypothesized that high-quality teacher–student interactions promote reading achievement indirectly through positive associations with children's engagement in classroom activities.

Initial consent included 333 children, which was 60% of entering kindergarten students. The longitudinal study selected 4 or 5 kindergarteners from the consenting group in each class randomly to include 171 kindergarten students in the current study, conducted over two years (2005–2007) across 36 classrooms (Ponitz, Rimm-Kaufman, Grimm, & Curby, 2009). The study took place in a rural area of southeastern United States, in an early elementary building, with few high-income families in the sample.

Data was gathered from four sources: parents, classroom observation, direct assessment, and teachers. Parents completed questionnaires at kindergarten registration. Research assistants

collected observational data at least three times during the year. Direct standardized reading achievement scores were obtained through individual administration during the fall and spring of kindergarten. Teachers rated students on their self-control in March of their kindergarten year (Ponitz, Rimm-Kaufman, Grimm, & Curby, 2009).

Findings revealed that for children to make progress in reading, placement in a high-quality classroom is not enough. High-quality classroom practices and activities are critical for promoting reading achievement only if they promote student behavioral engagement; students' ability to follow directions, stay on task, and be active learners (Ponitz, Rimm-Kaufman, Grimm, & Curby, 2009).

Limitations include that the large number of observations may affect interobserver reliability. However, the researchers accounted for this through training, monthly meetings, and discussion. Also, students were only observed on 3 different days, for a total of 30–50 minutes per student.

This study examines the associations between early social adjustment and later academic performance. Teachers not only provide academic guidance to students, but they also are responsible for controlling activity level, communication, and peer contact in addition to behavior support and social skills (Hamre & Pianta, 2001). Teachers and students see that the emotional connection between adults and students at school is an important influence on student performance.

The study sample included 179 children, which was a subset of 436 children who were in kindergarten during the 1988-1989 school year in a small city district. The subsample included students who remained within the district through eighth grade. The only difference between the group and the subsample was the presence of a higher percentage of African Americans in the

subsample. The sample included 91 boys, 88 girls, 60% White, and 40% African American. The kindergarten teachers in the sample had an average of 10.3 years' experience (Hamre & Pianta, 2001).

All subjects were administered a school screening battery at the start of kindergarten, including a cognitive development measure, teacher questionnaires, behavior data, and disciplinary records. Kindergarten teachers reported closer and fewer conflicted relationships with girls than with boys. Girls and boys had similar test scores in lower and upper elementary school, but the girls had higher literacy grades and fewer discipline referrals (Hamre & Pianta, 2001).

Teachers' perceptions of high conflict and dependency were related to poor academic outcomes for boys from the first grade through eighth grade. Students with more negative relationships with their kindergarten teacher had fewer positive work habit marks in lower elementary than peers with more positive relationships. The study suggests that the quality of the teacher–child relationship is a strong predictor of behavior outcomes (Hamre & Pianta, 2001), with an association in academic and social outcomes of school performance. The study also suggests that boys with low levels of conflict and dependency with kindergarten teachers have better lasting results, while girls with close connections in kindergarten had fewer behavior problems in later years. Finally, students with significant behavior problems in early years who form relationships with teachers that are in low conflict may be less likely to have continuing behavior problems compared to peers.

Limitations include the absence of repeated measurement of the teacher–child relationship as children progressed through school. The difference in school outcomes explained

by kindergarten measures of teacher–child relationships was small. The study did not include how children's attitudes toward their teachers affected their school experiences.

Looping

Looping has four basic principles. First, students will remain together for longer periods than in a traditional classroom rotation by staying together from one year to the next. Second, teachers stay with the class as they move from one grade level to the next. Third, the length of time of the loop needs to be determined, with two years being the minimum and most common. Fourth, teachers need to be qualified for the next grade level that they are responsible for when they move up with the class (McCown & Sherman, 2002).

A mixed methods study by researchers Chirichello and Chirichello (2001) used two surveys to assess parent and student views on looping at the end of first grade, and then the end of second grade. The surveys focused on identifying the impressions of parent and student regarding looping's social, emotional, and academic advantages, before and after the practice was started (Chirichello & Chirichello, 2001).

The school in the study was a K-2 elementary with approximately 1,700 students from upper-lower to lower-middle socioeconomic backgrounds. The looping teacher was a 19-year veteran who volunteered to loop from first to second grade with students. Each parent received a survey prior to looping, in June 1999, and again in May 2000 (Chirichello & Chirichello, 2001). The students responded to the surveys during the same months. Sixteen parents and 18 students who were with this teacher for the two years responded to the surveys. Four students who joined the class in September of second grade responded to a modified survey. After continuous research ten additional statements were added to the survey for parents at the end of the second year.

Preliminary surveys showed that the parents believed that looping would benefit their child emotionally, socially, and academically. At the end of first grade, most parents responded to 15 of the 16 questions with agree or strongly agree, and 13 statements reported similar results at the end of second grade (Chirichello & Chirichello, 2001). One question that did not fall into this range on both of the surveys was the difficulty that new students faced entering the looping class in year two. Parents believed that the adjustment for these students would not be easy which was found to be true as the three parents whose students entered the class at the beginning of year two agreed that the adjustment had been difficult.

The parents who responded to each of the six statements centered on social issues answered similar toward the "strongly agree" from year one to year two. The statements examined relationships among the teacher, parents, and students; student relationships between and among themselves; the classroom climate; and the match between the teacher and student (Chirichello & Chirichello, 2001). The parents' responses to three of the four statements that focused on the emotional issues answered more towards strongly agree in May 2000 than at the end of first grade in June 1999. These statements examined their child's confidence, security, and anxiety levels. Although parents did not strongly believe that their child's grades would improve because of looping, they consistently believed that looping would enable the teacher to know their child's strengths and weaknesses better. On both surveys, parents also thought that looping would allow the teacher to meet their child's learning needs (Chirichello & Chirichello, 2001).

The student surveys contained 11 statements. The students could respond to each statement by circling a happy, neutral, or sad face. In the survey used for the second grade, the wording for six statements was changed to prompt responses of "yes," "not sure," or "no."

Numerical values were assigned to the responses, producing class averages. Three statements addressed social issues, seven addressed emotional issues, and one addressed academics. Scores at or above 2.5 were considered very strong, and those above 2.0 were considered strong. There were no mean scores below 2.1 (Chirichello & Chirichello, 2001). Therefore, these 18 students had positive looping experiences. Students had the strongest, most consistent responses to several statements in each of these three areas: social, emotional, and academic. In year two, student perceptions became stronger regarding the level of trust they enjoyed with their teacher. Students perceived that they made friends with the new students who joined the looping class in September 2000.

Several parents were interviewed while their children were in first grade, and they unanimously agreed that they based their decision to remain in the looping class on their satisfaction with their child's first-grade teacher Chirichello & Chirichello, 2001). Parents felt strongly that the following positive relationships are essential to their child's successful learning experience: teacher–student relationships, teacher–parent relationships, student-to-student relationships, and parent–child relationships.

Students who were interviewed toward the end of first grade felt happy when they knew they were going to have the same teacher again for second grade. The students considered their relationships with the teacher to be strong. At the end of second grade, the students had mixed emotions about going to third grade.

Jacobson (1997) conducted a study that included all of the teachers at Manatee school located on the edge of the Everglades. Teachers remained with their students for multiple years, thus looping with their class. Manatee's students are predominantly Hispanic, and more than

70% qualify for the free and reduced lunch program. School leaders who use looping report it reduces discipline and increases attendance for students and teachers (Jacobson, 1997).

Teachers noted that in the case of students who are behind their peers academically, looping can prevent them from retention or being referred to special education because teachers have more than a year to make decisions. Manatee school is unique in that it organizes the entire school around the concept of looping versus a group of classrooms (Jacobson, 1997). The school keeps students together through eighth grade.

Attleboro public school district located in Massachusetts mandates that every teacher loops in their five elementary schools (excluding kindergarten) and three middle schools (Jacobson, 1997). The practice of looping affects about 4,400 students. Some teachers retired or left when this approach was implemented, due to concerns with learning the new curriculum. However, after seven years "most teachers fully support the approach of looping" (Jacobson, 1997). These schools generally score above the state average on state assessments (especially on open-ended questions) and above when compared to similar school districts. Looping advocates agree on the need for there to be an alternative for parents and students who do not want the same teacher for two years. While few costs are attached to implementing looping as an instructional approach, teachers will need time to plan for a new curriculum (Jacobson, 1997).

A study conducted by Baran (2008) investigated the effect of a looping program from seventh to eight grade at a middle school in northeastern Wisconsin. The study measured the impact of looping on students' academic motivation and attitudes toward school activities. A descriptive research design surveyed looped seventh and eighth graders. The School Attitude Measure (SAM) developed by Wick (1990) was used, to examine student school attitudes with respect to academic motivation, self-concept, sense of control, and instructional mastery. The 85-

item School Attitude Measure was completed by students within 30–35 minutes. Answers were given on a 5-item response scale: never agree, sometimes, agree, usually agree, and always agree (Baran, 2008).

The population of the sample included 78 seventh graders and 73 eighth graders who had looped as middle school students. All eighth-grade students were in their second year of the loop. Students were 98.4% proficient in English and 6.9% of the school was eligible for free and reduced lunch. Composite means and standard deviations were computed for each of the SAM attributes from the 45 (58%) seventh graders and 31 (42%) eighth graders who participated in the survey in late April (Baran, 2008).

Means and t-values were calculated for both grade levels for each of the five-attitudinal scales; there were an equal number of statements for each of the five-attitudinal scales and students answered using a 4-item response scale: never agree, sometimes agree, usually agree, and always agree. Results from the study showed that eighth-grade looped students scored higher than the seventh-grade students on two of the five attitudinal scales: academic motivation and sense of control over performance. A significant difference was found in academic motivation (2.503, $p < .05$) of looping students from seventh grade and a significant difference on sense of self-control over performance (2.245, $p < 0.05$) (Baran, 2008).

Rocklin Unified School District, located in Placer County, CA, implemented looping as an explicit instructional approach in 1993 at Rocklin Elementary (Capp & Elliott, 2003). After the concept was implemented, parents began requesting the looping classroom and more looping classrooms were established at each grade level, kindergarten through six grade. Sierra Elementary, also in the Rocklin Unified School District, was built in 2001 on the concept of the looping design (Capp & Elliot, 2003). The principal of the school commented that students from

all economic levels were able to develop more successfully than their peers in a traditional classroom. Since teacher and students remained the same during the second year, teachers were able to better pace their lessons. There was no guesswork about a students' academic progress, strengths, and weaknesses.

Parent feedback was requested at Sierra Elementary, where parents are on a waiting list to be admitted to the school. A list of 30 randomly selected parents whose students had looped for at least two years were asked to rate the approach on a survey. They rated the statement: "Compared to traditional grade-level grouping, I believe I have seen growth in my child across at least two years of looping that suggest to me looping is the best way for schools to be organized" (Capp & Elliott, 2003). They used a Likert-type scale to rate the statement, with 0 being no difference and 6 being maximum effectiveness. Parents marked 22 of the 30 surveys with a 6, one was marked 5.5, and seven surveys were marked with a 5. The mean rating from parent responses was a 5.783 (Capp & Elliott, 2003).

Another study investigated the gains that can be associated with teacher–student familiarity from repeat teacher–student matches (Hill & Jones, 2018). The study included data on third, fourth, and fifth-grade students and their teachers from North Carolina elementary schools between the years 1997 and 2013. Data was sourced from a North Carolina Education Research Data Center (Hill & Jones, 2018).

In the study, students were matched to the teacher (90% female) who administered the end-of-grade mathematics test (Hill & Jones, 2018). Included were 2,111,082 unique third to fifth-grade students and 70,471 unique teachers who taught at least one third to fifth-grade class during the study period. The student population included in the study was 40% minority, and approximately 50% students were female.

Only 3% of students had a repeat teacher-student match in fourth and fifth grade, and only 15% of the 1,713 schools had a repeat match during the sample period. This represents over sixty thousand students in the study (Hill & Jones, 2018). Approximately 10% of the teachers in the sample were involved in a repeat teacher-student match. The researchers investigated the extent to which a repeat teacher-student match is the product of traditional looping, where the entire class progresses to the next grade level with the teacher (not common in this study). Only 3% of student-grade observations were in classes with a looping share of 80%, with 2% of classes including a looping share of at least 20% (Hill & Jones, 2018).

The results showed that students who are matched to a particular teacher for a second time scored higher on standardized end-of-grade tests than they did in their first year with the same teacher, implying that teacher–student familiarly improves student achievement. The effects on non-minority students was 0.017, $p < 0.01$ and for minority students for repeating teacher–student match it was 0.034, $p < 0.01$.

These results also corroborate Cistone and Shneyderman's (2004) mixed methods study, which suggests that looping is a positive instructional approach and a low-cost policy. The study investigated how looping affected student instruction outcomes, attendance, and retention rates. Cistone and Shneyderman (2004) surveyed principals and teachers to assess their reactions to looping. Participants were from a large urban school system in Florida and included 26 elementary schools during the 1999-2000 school year. In some schools, only gifted or Advanced Academic Placement students participated in the looping program. In other schools, students in regular classes participated in the looping program. Some of the schools in the study had only one or two classes that participated in looping, while other schools had all classes at certain

grade levels participate. Some of the schools had looping in first and second grades, others in third and fourth grades, and some in only second and third grades.

All 26 elementary schools that implemented looping during the 1999-2000 school year were considered. Eleven schools were in the first year of the loop, so they were excluded. In addition, schools with only gifted or Advanced Academic Placement program students participating in looping were excluded. Two student samples were created that represented students participating in looping and matching peers who did not participate in looping. The looping sample included all those students from looping classes of selected schools who were taught by the same teacher during the 1998-1999 and 1999-2000 school years. This sample included 612 students. For the matching sample, students in the looping sample were matched to those students of non-looping schools in the school system who stayed in the same school during 1998-1999 and 1999-2000 school years and who matched the students in the looping sample for gender, race/ethnicity, status on free/reduced lunch, primary exceptionality, and English for Speakers of Other Languages. This procedure created a group of possible "matches" for each student in the looping sample.

The norm-referenced component of the Florida Comprehensive Assessment Test (FCAT) administered in March 2000 was used to compare the achievement of students in the looping and matching samples (Cistone & Shneyderman, 2004). Since the mean achievement results in reading and mathematics obtained before the beginning of the loop (in March of 1998) were virtually identical for students in the two samples, no statistical adjustment for prior achievement was necessary. Comparisons of students in the looping and matching samples included 581 and 577 paired achievement scores in mathematics and reading respectively for academics. The end-of-year data for the 1999-2000 school year were used to compare the attendance and retention

rates of students in the looping and matching samples. This data was available for all 612 students in both samples (Cistone & Shneyderman, 2004).

Principals of the elementary schools that used looping in the 1999-2000 school year were surveyed. The principals' questionnaire consisted of eight true/false questions to measure opinions about the benefits of looping, three open-ended questions for criteria in selecting teachers to participate in looping, as well as the advantages and weaknesses of looping in their schools. Of the 26 principals with looping during the 1999-2000 school year, 18 returned the questionnaires (69% return rate) (Cistone & Shneyderman, 2004). For the teacher surveys, 96 teachers were asked to participate and 58 questionnaires were used for the analysis (60% rate); 11 teachers were in their first year of the loop, with no previous looping experience. The teachers' questionnaire included 14 true/false items to measure reactions to looping and two open-ended questions on the advantages and shortcomings of looping.

The results indicated that the students from the looping sample outperformed (achievement) their equivalents in the matching sample. Looping positively affected student attendance. Also, students in the looping sample had a significantly better chance (3.53 times as likely) of being promoted to the next grade level (Cistone & Shneyderman, 2004). The average number of days absent decreased by approximately one or two days for students in the second, third, and fifth grades between the two academic years, and it remained at nearly the same level for the fourth graders.

The mean scaled score for students in the looping group was significantly greater than that for students in the matching group (3.78, $P < .001$). An average student in the looping sample outperformed approximately 56% of students in the matching sample on the reading comprehension part of the FCAT (Cistone & Shneyderman, 2004). Students in the looping

sample consistently outperformed the students in the matching sample on the reading comprehension section of the FCAT across the different grade levels that the samples comprised. The mean reading scaled scores of students in the looping sample were higher (percentile ranks varied from four to eight points higher) than those of students in the matching sample for all grade levels. The mathematics applications section of the norm-referenced part of the FCAT was used to make academic achievement comparisons for students in the looping and matching samples. The mean mathematics scaled scores of students in the looping sample were higher than those of students in the matching sample across all grade levels. The students in the looping sample outperformed their peers (percentile ranks varied from six to nine points higher) in the matching sample on the mathematics application section of the FCAT across all grade levels represented in both samples (Cistone & Shneyderman, 2004). The retention figures for students in the looping sample in the 1999-2000 school year (the second year of the loop) and in the matching sample were compared, and only two students in the looping sample were retained, compared to seven students in the matching sample.

"Most principals and teachers surveyed had positive opinions about looping and believed the benefits of looping greatly outweighed its drawbacks" (Cistone & Shneyderman, 2004). They agreed that looping improved the working relationship between teachers and their students. Teachers were passionate about looping, but also believed they should be allowed to decide whether to participate in looping or not (Cistone & Shneyderman, 2004).

A mixed methods study was conducted that focused on elementary classroom teachers' perceptions about looping (Denault, 1997). The study involved interviews of teachers from Central Massachusetts who were searching for ways to strengthen the teaching and learning process, and visits to looping classrooms in central Massachusetts, Ohio, and Maryland.

Teachers from various locations across the nation were asked to complete a questionnaire. Looping may offer schools that are considering restructuring another choice to the traditional progression of students through the grade levels.

Findings from the interviews of several teachers, visits to their classroom, and responses to the survey across the United States were positive and demonstrated the success of a stronger school–home link, sense of community, reduced anxiety between grades, affective gains, and increased time on task (Denault, 1997). Surveys showed that 97% of the teachers who responded indicated a strong home–school connection. Of the teachers surveyed, 100% observed increased time on task (Denault, 1997). Organizational issues did not exist during the second year of the loop. In addition, 94% of the teachers believed they had accomplished more during the academic year. All of the teachers surveyed indicated more freedom with their teaching and assessment practices. Of the teachers interviewed and surveyed, 85% showed an interest in looping again (Denault, 1997). However, Denault (1997) reported that a drawback of looping is the potential for a child to be with a poor teacher for more than one year and a possible mismatch between students and a teacher. It is important to permit flexibility within the looping model. The main limitation was that the research was conducted mostly through interviews and questionnaires.

A qualitative case study by Harding (1997) illustrates how looping helped one student specifically. The student was identified as having a learning disability, but since the teacher was moving from kindergarten to first grade with the class, and the parent trusted the teacher, she was able to place the student within the classroom part time. The student made so many gains that, by the start of third grade, the student tested out of special education services and was no longer considered a student with a specific learning disability (Harding, 1997).

In a study conducted by Little and Dacus (1999), a school began looping with six teachers. The teachers wanted students to feel more comfortable at the beginning of the school year and thought by looping teachers would spend less time on rules, benchmark testing, and identifying students' strengths and needs with respect to learning styles (Little & Dacus, 1999). Teachers along with the principal implemented the practice as a trial approach. They met regularly during the year to collaborate and evaluate progress.

After the six teachers ended the year further along in the curriculum with their class than they had anticipated, eight teachers decided to participate in the looping program for the following year. During the process, the teachers found that it was important to meet regularly as a group to discuss advantages and disadvantages and to make any necessary adjustments, such as moving to another classroom, sharing materials, and grade-level support. The principal ensured that students were equally distributed based on reading levels, intelligence, race, work habits, and socioeconomic status. Through the process, few problems arose, parent support increased, and one parent even requested the same teacher for a third year (Little & Dacus, 1999).

In a study on looping in preschool, researchers Sharon and Phillips (2006) investigated whether looping made a difference in personal, social, and academic achievement for at-risk preschool students. Oak Ridge Schools started implementing looping in 2001. In this study, five out of the 12 classrooms were looping classrooms (2 to 3-year-olds' classes and 4 to 5-year-olds' classes). The preschool used a Head Start program, and students were selected based on meeting qualifying eligibility criteria: socioeconomic status, Title I, and/or special education (Sharon & Phillips, 2006).

The study included assessments from 226 students (two cohorts) from the same preschool from 2001-2003 and 2002-2004. The sample included 167 children who had a different teacher

for each year and 59 children who had the same teacher for both years (transient community caused a difference between the two groups) (Sharon & Phillips, 2006). Individual assessments took place three times a year to assess cognitive development and early academic skills. Social skills were assessed through a teacher report.

Results showed that looping students earned higher assessment scores compared to non-looping students in both personal and social development (Sharon & Phillips, 2006). Additional areas of assessment included language and literacy, mathematical thinking, scientific thinking, social studies, the arts, and physical development. Differences in math thinking showed that non-looping students earned higher scores compared to looping students, but there were no differences in scores in the remaining five domains (Sharon & Phillips, 2006).

Another study on looping in childcare indicated many positive outcomes. The study emphasized the importance of parents and that parents should not be forced into a looping program (Hedge & Cassidy, 2004). The concept of looping was introduced due to a teacher starting with a group of infants and staying with the group through the start of kindergarten (Hedge & Cassidy, 2004). Parents and teachers were interviewed during this research study on the following: stability and continuity of care, ease in transition, anticipating children's needs, parent relationships, caregivers' preferences and skills, planning classroom activities, strained parent-teacher relationships, transition from looping, and philosophies (Sharon & Phillips, 2006).

This study did not completely explore the teacher and student attributes that are most helpful in making looping successful. It is important to determine which teachers and students would benefit the most. Also, this study did not investigate how looping affects student's cognitive, social, and emotional development.

The existing challenges at this age are due to turnover (about 30% of early childhood teachers leave each year). Of the teachers interviewed, one had a Bachelor of Science degree in psychology and the other two had Bachelor of Science in early childhood degrees. Teachers were interviewed in the second year of their loop (six children were transitioned from the infant to toddler classroom with the same teachers). Bother teachers and parents believed looping helped build strong relationships between the teachers and students. Parents also stated that the transition was considerably easier for students. Teachers reported that it helped them better anticipate student needs. Challenges for teachers included being able to be highly effective with each age group as they progress. For parents, a drawback included that when the transition to a new teacher eventually did take place, it was more difficult (Hedge & Cassidy, 2004).

Nitecki (2017) conducted a case study using a qualitative approach within a northwestern private preschool in the United States. The study examined how the preschool program used looping and what the benefits were versus the challenges associated with the instructional approach of looping (Nitecki, 2017).

The Montessori preschool was known for independent learning and student choices, and had an enrollment of thirteen students. The Montessori philosophy encourages social and emotional development and values relationships. The study included 9 males and 4 females ranging in age from 2 ½ – 6 years. The children were grouped together with the same teachers in the two-room school for the duration of their schooling, typically two to three years (Nitecki, 2017).

The study used a qualitative approach involving participant observation. Data was collected on naturally occurring behaviors in typical situations. Three forms of data were triangulated to establish themes: observation at the school, interviews with teachers and parents,

and documents from the school and surrounding community (Nitecki, 2017). The interview discussions were audio recorded and transcribed. Observation was documented in the observer's notes. To assure consistency and honesty, observation criteria were specified and a set of questions was used with at least one parent of every child at the school (Nitecki, 2017). The qualitative data was then systematically coded and analyzed to determine similar themes from all three sources: the institutional documentation, the interviews, and the observation.

One of the most noticeable benefits of looping is the consistent relationships with students and families over time (Nitecki, 2017), which is why parents supported the approach. However, challenges associated with looping are the teacher's ability or willingness to adjust to a variety of age levels, and finding a good fit between teacher and students. If it is not a good match, there is the potential for negative relationships and consequences for years. Finally, there is the concern that the child who has become accustomed to the same teacher will have to adjust to a new teacher at some point, and this may be more difficult. A limitation of the study is the small size of the school.

A qualitative study using semi-structured interviews was conducted by Carlyon (2013) to gain in-depth understanding of how the participants experienced changing class levels. The participants for the study consisted of four primary school teachers who all changed class levels in New Zealand schools (three of which had experienced teaching all primary levels). The teachers participated in an in-depth interview and shared their experiences, including demographic information.

Findings on teachers changing grade levels showed that this change requires and encourages teachers to engage in ongoing critical reflection (Carlyon, 2013). Two benefits found from changing grade levels were that the teacher's instructional practices improved, as did the

teacher's ability to manage different learning environments. When teachers change class levels, it can result in planning instruction in new ways, developing new programs, and gaining a better understanding of the developmental needs of children from different age groups (Carlyon, 2013).

Waldorf schools utilize looping exclusively. A study on a Waldorf school in Sacramento analyzed multiple years of student data, including demographics, achievement, attendance, behavioral notes, and graduation rates. The study found that students were more successful when they created lasting relationships with teachers (Friedlaender et al., 2015).

The study included 39 interviews and 387 observations of out-of-class activities, school events, and teacher training during the 2013-2014 and 2014-2015 school years. Value added methodologies were used to examine achievement gains of the California Star Test (CST). Students attending the Alice Birney Waldorf Inspired School, enrollment of 584 students with the majority White and 29% socioeconomically disadvantaged, produced greater value-added scores for student achievement in ELA and mathematics compared to other Sacramento City Unified School District Schools (SCUSD). On the California Star Test (CST), all grade levels at Alice Birney Waldorf outperformed SCUSD in ELA and math.

After examining students' intention to return to Birney from one year to the next in kindergarten through seventh grade compared to other SCUSD schools, the researcher found that 90–97% of students planned to return to Alice Birney, with only 76–86% planning to return at other SCUSD schools. Alice Birney Waldorf provided a stable learning environment, which influenced student achievement, but it is unclear to what extent (Friedlaender et al., 2015). Limitations include equitable access and transferring to all types of families and students. Birney draws more educated, White families that are considered to be economically established.

The study compared standardized test measures of 20 public Waldorf schools to district standardized scores in reading and math and matched comparison schools (Larrison et al., 2012). The three data sets were: A) public Waldorf schools against district standardized test scores for 2008, B) performance on Standardized Testing and Reporting (STAR) for California public Waldorf schools for 2009, and C) longitudinal performance on STAR for California public Waldorf schools from 2005–2011.

The 20 schools were compared for data set A, and standardized test scores in reading and math were compared to district averages. Data for B included 15 public Waldorf schools compared to 20 matched schools in district for socioeconomic status and minority. Data for C compared 11 Waldorf schools to 11 matched schools for highest-performing kindergarten to eighth grade (Larrison et al., 2012).

Results from the study included an increase from 26% to 63% for students' grade level scores over a three-year time period. Achievement scores were compared on national assessments of fourth graders in the Urban Waldorf School to scores in a bordering school with comparable demographics. There was a larger number of students performing at a higher level in the Waldorf schools (Larrison et al., 2012).

Limitations of the study include that data presented represents only a part of the population enrolled at the schools. The findings are considered supportive, but not conclusive. Future research suggested by Larrison et al. (2012) includes using controlled surveys or interviews. Those who chose to post comments on GreatSchools.org represent only a few opinions from the numerous individuals that comprise the school community.

Summary

Reading instruction at the primary grades is the basis for reading achievement which was found to be correlated to phonics instruction, fluency, and comprehension. Juel (1998) found students who were poor readers in first grade usually stayed poor readers at the end of fourth grade. By the middle of kindergarten, effective prediction of first and second grade reading achievement could be made (Morris et al., 2003). To improve literacy, students need to learn to read in the primary years when instruction and interventions can address deficits before third grade. In addition to a reading program with substantial phonics instruction, the relationship between a student and teacher can vastly impact student achievement.

Research has demonstrated teacher–student relationships as having a significant impact on student learning. Student achievement, specifically at school entry, and measures of the teacher and student relationship quality are highly correlated (Mason et al., 2017). Students in kindergarten and first grade already learn to develop trust or distrust of teachers. The teacher–student relationship and a stable learning environment may increase student engagement and increase students' reading achievement (Stephanou, 2014). In addition, spending two years with the same cohort of students allows peers to develop deeper relationships in a classroom community that supports learning. Parents of looping children have a positive attitude and more optimistic perceptions of what is taking place in the classroom (Nichols & Nicholas, 2002).

Looping, a teacher staying with the same group of students for two or more years, is a practice that may improve academic achievement with little disruption to the school climate. Hill and Jones (2018) found students who are matched to a particular teacher for a second time scored higher on standardized end-of-grade tests than they did in their first year with the same teacher, indicating that teacher–student familiarly improves student achievement. School leaders who use

looping say it reduces discipline and increases attendance for students and teachers (Jacobson, 1997). Furthermore, at the beginning of the school year, looping allows instruction to begin on the first day of school instead of the typical “get to know you” stage that starts each new school year when a new teacher and new classroom of students are introduced to each other.

Chapter III: Methodology

Development of early literacy skills among students has been, and continues to be, an area of concern for educators, policymakers, and society in general. More than 37% of students start kindergarten without the skills necessary for lifelong learning (Landry, 2005). Students who are not reading at grade level (i.e., reading third grade material) by the end of third grade are four times more likely to drop out of high school than students who are reading at grade level (Hernandez, 2012).

The current study examined the reading achievement levels of students who participated in a two-year instructional loop compared to students assigned to traditional classrooms. Looping placed students with the same classmates and same teacher over multiple years. The looping sample included all students who completed the loop from kindergarten to first grade in a northwest Ohio elementary school. Students who did not complete the two-year loop were excluded.

This study investigated whether looping from kindergarten to first grade was associated with improved student reading achievement measured by Ohio's ELA state assessment, specifically by third grade, a critical year for literacy and future reading ability. The study further investigated whether looping students outperformed non-looping students on the ELA state assessment in grades three, four, and five, by examining students' reading achievement beyond the two-year loop and determining a possible correlation between and student performance.

This chapter outlines the design for investigating the research questions for the study, as well as the participant profile of the study and the sampling method used to conduct the research. The chapter explains the basis for the data collection, the method of data collection and analysis, as well as the assumptions for the study. Also included are ethical considerations of the study.

Research Questions

1. Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the first administration (fall of third grade) of the English Language Arts state test than non-looping students?
2. Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the second administration (spring of third grade) of the English Language Arts state test than non-looping students?
3. Do students who participated in looping from kindergarten to first grade outperform non-looping students on the English Language Arts state test in grades three, four, and five?
4. Do second through sixth-grade teachers observe a difference in classroom performance between students who looped and their non-looping peers, based on completed teacher surveys?

Research Design

The purpose of this study was to examine whether students who participated in the looping program of a small Midwestern elementary school from kindergarten to first grade demonstrated increased reading achievement compared to students assigned to traditional classrooms. A quantitative design was used to conduct the research. An ex post facto, quasi-experimental research design was used. Ex post facto research uses data already collected, but not specifically for research purposes. Ex post facto translates to *from what is done afterwards* (Simon & Goes, 2013). Students were not randomly assigned in this study; instead, students had already been previously grouped based on looping or non-looping status. Student classroom assignments were random according to guidelines consistent with all classroom compositions within the building: ratio of boys to girls, students identified with disabilities, students identified

as gifted, students who require Title I services, and students with challenging behaviors. Each year, grade-level teams met to review students' progress and discuss student placement in collaboration with the building principal, district curriculum director, and the director of student services to ensure classroom composition equality.

This study examined student scores on Ohio's English Language Arts (ELA) Third Grade State Assessment, as well as the fourth and fifth grade results for certain looping cohorts. The study compared students' scores in relation to their participation in the looping program or in a traditional classroom. The independent variable was whether or not students participated in a looping classroom. The dependent variable was student ELA scores. This study's research design included analysis of data based on causes, looping or non-looping, studied after the effect (reading achievement) to support or reject causal explanations. Additionally, teachers' perceptions of students were included through the use of a survey. Teachers in grades two, three, four, five, and six were asked to complete a survey, as their classrooms included current students who looped from kindergarten to first grade. The 9-question survey with questions from academics to organization used a 5-point Likert-type scale with answer choices ranging from never to always.

Table 1

Research Basis for the Design of the Research Instrument

Survey Question	Research Basis
1. What grade level are you currently teaching?	Researcher Generated
2. Students who participate in a looping classroom earn higher scores on reading assessments (STAR/Reading Plus).	Klem and Connell (2004)

3. Students who participate in a looping classroom earn higher scores on math assessments (STAR/ASCEND).	Klem and Connell (2004)
4. Students who participate in a looping classroom display fewer negative behaviors (off task, disruptive, etc.).	Roorda et al. (2017)
5. Students who participate in a looping classroom understand and consistently follow classroom rules.	Doumen et al. (2011)
6. Students who participate in a looping classroom turn in their homework on time.	Roorda et al. (2017)
7. Students who participate in a looping classroom earn higher reading grades on their quarterly report card.	Hill and Jones (2018)
8. Students who participate in a looping classroom earn higher math grades on their quarterly report card.	Hill and Jones (2018)
9. Students who participate in a looping classroom actively participate in class discussions.	Roorda et al. (2017)

Reading achievement scores from Ohio's ELA state assessment were extracted from PowerSchool and compared and analyzed to determine whether students who looped earned a higher score than students from classrooms who did not loop. PowerSchool is a unified classroom platform that organizes student information from demographics to medical conditions, and includes a history of assessment results (https://www.powerschool.com/).

Participants and Sampling Technique

Participants in this study included 315 third-grade students, 183 fourth-grade students, and 105 fifth-grade students. Of these, 108 students from the third grade, 30 from the fourth grade, and 30 from the fifth grade participated in the looping program from kindergarten to first

grade. The remaining participants in the study included 207 third-grade students, 153 fourth-grade students, and 75 fifth-grade students, all of whom were assigned to a traditional classroom. This study was designed to determine whether looping students outperform non-looping students on the ELA state assessment, specifically in third grade (a full year after the loop has ended). Additionally, this study measured teachers' perceptions of the impact of looping on student performance, to determine whether the teachers observed improvements that continued into the non-looping years, (second through sixth-grade teachers).

The first cohort included in the study began looping in kindergarten during 2013-2014 school year and looped to first grade for the 2014-2015 school year. They took the third-grade ELA test during the 2016-2017 school year (35 looped, 80 non-looped), the fourth-grade state ELA test during the 2017-2018 school year (30 looped, 69 non-looped), and the fifth-grade ELA test during the 2018-2019 school year (30 looped, 75 non-looped).

The second cohort began looping in kindergarten during the 2014-2015 school year and looped to first grade for the 2015-2016 school year. They took the third-grade ELA test during the 2017-2018 school year (33 looped, 67 non-looped), and their fourth-grade ELA test during the 2018-2019 school year (30 looped, 54 non-looped). There is no fifth-grade data for this cohort.

The third cohort began looping in kindergarten during the 2015-2016 school year and looped to first grade for the 2016-2017 school year. They took the third-grade ELA t assessment during the 2018-2019 school year (38 looped, 62 non-looped). There is no fourth or fifth-grade data for this cohort.

The population for this study was from a small rural school located in Northwest Ohio. In the elementary building containing the looping classes, there are consistently four to five sections

of classes at each grade level, kindergarten through fourth grade, each school year. Each year of data included in the study contained two looping classrooms. The school included in the research study has been looping students from kindergarten to first grade since the implementation of the Third Grade Reading Guarantee (TGRG), in the 2013-2014 school year. Table two includes demographic data representative of the elementary over the research period (ODE, 2017), including a breakdown of ethnicity, socioeconomics, attendance, students with a disability, and students who were identified as limited English proficient.

Table 2

Elementary Building Demographics

Year	Hispanic	White	Students with a Disability	Economically Disadvantaged	Limited English Proficient	Attendance Rate	ADM
2013-2014	5.9%	92.4%	17.0%	45.8%	NC	96.9%	510
2014-2015	5.4%	92.8%	17.1%	43.9%	NC	95.9%	520
2015-2016	4.4%	94.0%	16.2%	40.3%	NC	95.7%	529
2016-2017	5.9%	93.2%	13.0%	45.0%	2.1%	95.1%	521

NC = not calculated, less than 10 in the subgroup
ADM = Average Daily Membership

Students who began looping during the 2013-2014 school year were included. During the 2016-2017 school year those students were in third grade and were required to take Ohio's state ELA test and earn a set proficiency score in order to meet the TGRG. Students from the 2014-2015 school year were in third grade during the 2017-2018 school year, and the 2015-2016 students were in third grade during the 2018-2019 school year. Teacher feedback was examined on students' overall performance, when comparing students who looped to non-looping students.

Ethical Considerations

Students in the study were coded by number to represent looping versus non-looping status when reporting state ELA test results. Therefore, individual student identities were unknown and the participants were protected. The study was approved by the Institutional Review Board committee at the University of Findlay. Teachers in the survey knew the identity of students in their class who participated in the looping program. However, results reported in the study are generic without any personal identifiers. In addition, teachers were informed of student privacy rights. After the results were gathered by the researcher, the surveys were coded to protect individual student identities.

Instrumentation and Data Sources

Data on achievement was collected from Ohio's ELA state assessment. The district's building principal and the district's secretary in charge of information management shared data with the researcher. Every year, there are two administrations of the ELA state assessment in grade three: fall and spring. Ohio has had the same assessment since the 2015-2016 school year, which were tests created by Ohio education representatives in conjunction with the American Institutes for Research (AIR). A fall and spring administration has remained consistent in third grade.

Categories of performance for third grade, set by the state and AIR, for all three years included in the study were: Basic (545-671), Limited (672-699), Proficient (700-724), Accelerated (725-751), and Advanced (752-863). The fourth-grade categories of performance for both years were: Basic (549-673), Limited (674-699), Proficient (700-724), Accelerated (725-752), and Advanced (753-846). The fifth-grade categories of performance were: Basic (552-668), Limited (669-699), Proficient (700-724), Accelerated (725-754), and advanced (755-848).

The researcher created a survey for the teachers of second through sixth grade. Student identification was needed for teachers to complete the survey; however, the survey was not student specific and students remained anonymous during data analysis and interpretation of results. The survey focused on achievement in reading and math when comparing looping and non-looping students, in addition to behaviors (homework, negative behaviors, and classroom participation). Questions included in the survey came from the research presented in Chapter II, which found that looping may affect academic achievement as well as student behavior, both of which are priorities for classroom teachers.

The researcher piloted the instrument to eight volunteers who held similar roles to that of the survey population, but were not eligible to participate in the survey, to gain feedback. The pilot participants reported that "assessments" needed to be clarified, so specific assessments were added to questions two and three. Also, an explanation of negative behaviors was included in question four after volunteers asked for clarification. Additional comments from the volunteers included "easy to understand" and "quick to complete."

On average the survey took less than five minutes. However, completion of the survey during the data collection for the study took twice that long on average. This might be attributed to the fact that teachers reported on actual students instead of reporting on hypothetical situations as they did in the pilot study.

Data Collection Procedures

After receiving approval from the superintendent of the district, the researcher collected student test results on Ohio's ELA state assessment. Since student identities were concealed, parent permission was not required, and therefore not obtained. The data was organized according to school year and looping status. Teachers with looping students in second through

sixth grades were emailed the survey using Google Forms. The survey was voluntary and subjective. Teachers were given a week to complete the survey. The data was used to compare teacher perceptions on student performance after the loop ended. Testing data included for analysis already existed, was objective, and previously reported to ODE. The data allowed for a comparison of the performance of looping and non-looping students in Ohio's ELA test in third grade (the loop ended in first grade, therefore students had a new teacher for second grade and again for third grade). The data detailed how students in the fall and spring scored. ELA results were collected for fourth and fifth grade for the first cohort, and for fourth grade for the second cohort as well.

Approval to initiate this study was obtained from the Institutional Review Board at the University of Findlay before data collection took place (see Appendix A). Written permission to conduct this study was obtained from the superintendent of the school district and the elementary building principal (see Appendix B) before the collection of any research data. PowerSchool's database provided the roster of looping students from previous classroom lists and associated test results. Student results were coded to differentiate looping students from non-looping students from kindergarten to first grade. Students were separated according to looping status on a tracking form to disaggregate test results for analysis. Student identities were numbered to exclude any identifiable information.

The hypothesis was that students who looped from kindergarten to first grade will earn higher scores on state assessments, even though the loop ended at the end of first grade with traditional classroom placement from second grade forward. The null hypothesis was that students will earn comparable scores regardless of looping status and no significant difference will be found between students who looped and students in a traditional classroom (new class

composition and new teacher each year). The independent variable is student looping status and the dependent variable is results on the state ELA tests.

Data Analysis

A one-way ANOVA was used to compare the two groups' means, looping versus non-looping, from the state assessment results to identify if any significant differences existed for the first three research questions along with chi-square test to test for significance. The researcher compared looping students' test results with those of non-looping students and analyzed the test results to determine if looping students outperformed non-looping students. Results from both the third-grade fall administration of the test and spring administration were analyzed. In addition, data was analyzed using the state ELA test spring administration for fourth and fifth grades for the first cohort and fourth grade for the second cohort.

Assumptions

Assumptions in this study were that the teachers of both the looping and non-looping classrooms meet the definition of highly qualified, or equitable, according to the Ohio Department of Education, so that instruction across the grade was comparable.
ODE requirements are intended to guarantee that all students, regardless of where their school is located in Ohio, have equal access to teachers who meet set requirements, including professional development, licensing, or certification, and that teachers are teaching in their area of qualification (ODE, 2017).

It was assumed that students gave their best effort on assessments each time they were administered. It was also assumed that the state tests were appropriately administered by suitably trained teachers and according to each assessment's guidelines. Test administrators are required to review the procedures that are included in the regularly updated test administration manual

and all test administrators must be trained and must sign an ethical-use agreement (ODE, 2017). Furthermore, they are required to discuss the school's testing schedule with the building test coordinator and review Ohio's Accessibility Manual to plan for student tools, supports, and accommodations that are available during the testing.

Chapter IV: Results

The purpose of the study was to determine whether looping from kindergarten to first grade improved students' English Language Arts (ELA) scores and performance through the sixth grade, after the kindergarten to first grade loop ended. In addition, this study investigated whether looping students outperformed non-looping students on ELA state assessments in grades three, four, and five, by examining students' state assessment results for ELA achievement beyond the two-year loop and the possible impact that looping has on sustained student performance. Finally, this study examined teacher feedback on the difference between students' overall performance, academic and behavioral, when comparing looping students to non-looping students. This study examined student achievement in reading by comparing students who participate in a looping class from kindergarten to first grade with students who participate in a non-looping class. The study used students' state ELA test results from a rural Northwest Ohio school district.

To determine if looping had an impact on ELA scores and reading capability through the sixth grade, this study investigated the following four questions:

1. Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the first administration (fall of third grade) of the English Language Arts state test than non-looping students?
2. Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the second administration (spring of third grade) of the English Language Arts state test than non-looping students?
3. Do students who participated in looping from kindergarten to first grade outperform non-looping students on the English Language Arts state test in grades three, four, and five?

4. Do second through sixth-grade teachers observe a difference in classroom performance between students who looped and their non-looping peers, based on completed teacher surveys?

A quantitative, ex post facto, quasi-experimental research design was used to conduct the research. T-tests and chi-square tests were conducted using student scores from the test and compared to analyze the data for significance. Students were not randomly assigned in this study; instead, students had been previously grouped based on looping or non-looping status. The building principal, in addition to grade-level teacher teams, assigned students to a class roster creating a dynamic student group based on gender, ability, behaviors, and special needs. Students were assigned to classes as evenly as possible so that the ratio of boys to girls was even, students with identified accelerated needs, students with behavior needs and or plans (e.g. attention deficit disorder, oppositional defiant disorder) and students identified with special needs were evenly assigned across the kindergarten classrooms.

An unpaired t-test was used to compare the two groups' means, looping and non-looping, using the ELA state assessment results from each administration to identify if any significant differences existed between looping and non-looping students. An unpaired t-test with an alpha of .05 was used to compare two different test subjects and compare results: looping versus non-looping. Did looping students earn higher scores during each administration of the state ELA test, and did the looping students outperform non-looping students after the loop ended? What difference did teachers observe after the loop ended?

In addition, a chi-square test was used to compare students who scored proficient by category; looping versus non-looping at a critical value of .10. Was there a significant difference

between the students who scored proficient in relation to that category? Was there an association between looping and scoring proficient on the state ELA test?

Characteristics of the Sample

The population for this study came from a small, rural elementary school located in Northwest Ohio. The elementary building typically maintains four to five sections of classes at each grade level, kindergarten through fourth grade, each school year. Each year's data included in the study related to two looping classes. The remaining classes included non-looping students. Students either looped from kindergarten to first grade or were traditionally placed: a new teacher for kindergarten and a new teacher for first grade. After the loop ended (kindergarten to first grade) all students were traditionally placed (grade two and above), with new classmates and a new teacher each school year. The building principal along with the kindergarten teachers assigned students to each of the kindergarten classrooms ensuring that each class represented various student populations proportionately within the two looping classrooms and the remaining typical classrooms: boys versus girls, students on an individual education plan, students on an English Language Learner plan, students on a 504 plan, students with a behavior plan, and academic performance results from kindergarten screening.

The elementary building had an enrollment of mostly White students (92–94% over the years included in the study) and an average attendance rate of 95% over the time period included in the study. Over that same time period, the school reported 40–45% economically disadvantaged students enrolled, with 13–17% of students being identified as having a disability.

Table 3

Number of Students Who Participated in Each Test Administration

Kindergarten Cohort	Fall Third Grade ELA Test	Spring Third Grade ELA test	Fall Fourth Grade ELA Test	Fall Fifth Grade ELA Test
2013-2014	113	113	99	105
2014-2015	97	99	84	
2015-2016	98	98		

Research Question 1

The first research question asked was: *Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the first administration (fall of third grade) of the ELA test than non-looping students?* This research question was answered by comparing looping and non-looping students from the third-grade state ELA test for three cohorts of students who looped from kindergarten to first grade. Results compared the percentage of looping students who scored proficient or above to non-looping students who scored proficient or above.

The first cohort of looping students began kindergarten during the 2013-2014 school year and included 45 students who were placed in one of the two looping classrooms. By third grade, the 2016-2017 school year, there were 35 students who looped and 80 non-looping students for a total of 115 students. Of those 115 students, 113 participated in the fall administration of the third-grade ELA state assessment. The fall administration (2016) results for third grade from the 2013-2014 kindergarten cohort included 53 students who scored proficient or above (accelerated and advanced) and 60 students who scored below proficient. Of the 53 students who scored proficient or above, 18/53 (33.9%) were looping students and 35/53 (66.0%) were non-looping students. When comparing looping versus non-looping students; 18/35 (51.4%) of looping

students scored proficient or above, and 35/78 (44.8%) non-looping students scored proficient or above.

Looping students were 51.4% of the students who scored proficient or above, while non-looping students were 44.8% of students who scored proficient or above, a difference of 6.6%. When a two-tailed t-test was conducted to compare the two groups' means, the t-value equaled 0.52884. The p-value was 0.598253. The mean for the looping group was 687.43 and the mean for the non-looping group was 682.69, with the degrees of freedom 111.

A chi-square test was conducted to compare the number of looping students who scored proficient to non-looping students who scored proficient. When compared, 18/35 (51.4%) of looping students scored proficient and 35/78 (44.8%) of non-looping students scored proficient. A significance level of .10 was used. The chi-square statistic was 0.4171, with a p-value of 0.51847. The proportion of students that scored proficient or above did not differ by looping status, X^2 (1, N = 113) = 0.4171, p > .10. This result was not significant.

The second cohort of looping students began kindergarten during the 2014-2015 school year. There were 45 students who started out in one of the two looping classrooms. By third grade, the 2017-2018 school year, there were 33 students who looped and 67 non-looping students for a total of 100 students. Of those 100 students, 97 participated in the fall administration of the third-grade ELA state test. The fall administration (2017) from the 2014-2015 kindergarten cohort included 40 students who scored proficient or above, and 60 students who scored below proficient. Of the 40 students who scored proficient or above, 21/40 (52.5%) were looping students and 19/40 (47.5%) were non-looping students. Of the looping students, 21/33 (63.6%) scored proficient or above, and 19/67 (28.3%) of the non-looping scored proficient or above.

Looping students were 63.6% of the students who scored proficient or above, while non-looping students were 28.3% of students who scored proficient or above, a difference of 35.3%. When a two-tailed t-test was conducted, the t-value was 2.64138 and the p-value equaled 0.0097. The mean for the looping group was 705.74 and for the non-looping group the mean was 685.37, with the degrees of freedom 95. This is considered statistically significant.

A chi-square test was conducted to compare the number of looping students who scored proficient to non-looping students who scored proficient. When compared, 21/33 (63.6%) of looping students scored proficient compared to 19/67 (28.3%) of non-looping students who scored proficient. A significance level of .10 was used. The chi-square statistic was 10.3557, with a p-value of 0.001291. There is a significant relationship between students who scored proficient or above and looping status, X^2 (1, N = 97) = 10.3557, $p < .10$. This result was significant.

The third cohort of looping students began kindergarten during the 2015-2016 school year. That year there were 44 students who started in one of the two looping classrooms. By third grade, the 2018-2019 school year, there were 38 students who looped and 62 non-looping students for a total of 100 students. Of those 100 students, 98 participated in the fall administration of the ELA state test. The fall administration (2018) from the 2015-2016 kindergarten cohort included 56 students who scored proficient or above and 42 students who scored below proficient. Of the 56 students who scored proficient or above, 27/56 (48.2%) were looping students and 29/56 (51.7%) were non-looping students. Of the looping students, 27/38 (71.0%) scored proficient or above, and 29/60 (48.3%) of the non-looping scored proficient or above.

Looping students were 71.0% of the students who scored proficient or above, while non-looping students were 48.3% of students who scored proficient or above, a difference of 22.7 %. When a two-tailed t-test was conducted, the t-value was 0.99521, and the p-value equaled 0.3221. The mean for the looping group was 708.71 and the mean for the non-looping group was 700.72, with the degrees of freedom 96. This result is not considered statistically significant.

A chi-square test was conducted to compare the number of looping students who scored proficient to non-looping students who scored proficient. When compared, 27/38 (71.0%) of looping students scored proficient compared to 29/60 (48.3%) non-looping students who scored proficient. A significance level of .10 was used. The chi-square statistic was 4.9036 with a p-value of 0.026801. There is a significant relationship between students who scored proficient or above and looping status X^2 (1, N = 98) = 4.9036, $p < .10$. This result is significant.

All three comparisons of third grade students' results from fall administration of the ELA state test showed looping students earning a higher score compared to non-looping students. For the fall of 2016, percentages when compared showed that looping students had a higher percentage (by 6.6%) of proficient or above scores than non-looping students. Fall of 2017 percentages revealed that looping students had a higher percentage (by 35.3%) of proficiency than non-looping students. Finally, fall of 2018 percentages showed that looping students had a higher percentage (by 22.7%) of proficiency than non-looping students. While this shows that students who looped scored higher than non-looping students' results, the results as illustrated below will be compared for significance.

Table 4

Fall Third Grade State ELA Proficiency Percentages by Class Type

Year	Looping	Non-Looping	Difference
13/14	51.4	44.8	6.6
14/15	63.6	28.3	35.3
15/16	71.0	48.3	22.7

Numbers are represented as percentages

After conducting t-tests on the fall ELA test results only the 2014-2015 cohort showed significance. These results showed an increased mean. These t-test results are shown in the table below.

Table 5

T-Test Comparisons of the Fall Third Grade State ELA Test Results

T-test - Comparing the mean of student scores					
Year	T-Value	P-Value	Degrees of Freedom	Looping Mean	Non-looping Mean
13/14 113 tested	0.52844	0.598253	111	687.42	682.69
14/15 97 tested	2.64138	0.0097	95	705.74	685.37
15/16 98 tested	0.99521	0.322136	96	708.71	700.71

After conducting the chi-square test on the results, the 2014-2015 and 2015-2016 cohorts were found to be significant. These groups showed a significant difference between looping and non-looping students who scored proficient with regards to their category, looping. Results are shown in the table below:

Table 6

Fall Third Grade Chi-Square Comparisons of ELA Results for All Test Takers

Chi-square test - Comparing looping versus non-looping students who scored proficient				
Year	Chi-Square Statistic	P-Value	Looping	Non-Looping
13/14 113 Tested	0.4171	0.51841	18 (51.4%)	35 (44.8%)
14/15 97 Tested	10.3557	0.001291	21 (63.6%)	19 (28.3%)
15/16 98 Tested	4.9036	0.026801	27 (71.0%)	29 (48.3%)

Research Question 2

The second research question was: *Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the second administration (spring of third grade) of the ELA test than non-looping students*? Included in the results are comparisons between looping and non-looping students from the third-grade state ELA test for three cohorts of students who looped from kindergarten to first grade. Results compare the percentage of looping students who scored proficient or above to non-looping students who scored proficient or above.

Results from the spring administration (2017) for the 2013-2014 kindergarten cohort included 113 student results. Of the 113 tested, results showed that 84 students scored proficient or above and 29 students scored below proficient. Of the 84 students who scored proficient 27/84 (32%) were looping students and 57/84 (67.8%) were non-looping students. Of the looping students, 27/35 (77.1%) scored proficient or above and 57/78 (73.0%) of the non-looping scored proficient or above. Looping students were 77.1% of the students who scored proficient or

above, while non-looping student were 73% of the student who scored proficient or above, a difference of 4.1%.

When a two-tailed t-test was conducted, the t-value was 0.67256, and the p-value equaled 0.502639. The mean for the looping group was 722.77 and the mean for the non-looping group was 717.66, with the degrees of freedom 110. This result was not considered statistically significant.

A chi-square test was conducted to compare the number of looping students 27/35 (77.1%) who scored proficient compared to 57/78 (73.0%) non-looping students who scored proficient. A significance level of .10 was used. The chi-square statistic was 0.2094, with a p-value of 0.647273. The proportion of subjects that scored proficient or above did not differ by looping status X^2 (1, N = 113) = 0.2094, p >.10. This result is not significant.

This same cohort included 99 student results from fourth grade ELA state test (spring 2018) and 105 student results from the ELA state test for the fifth-grade year (spring 2019). There were 30 looping students during each of the two years. For the spring of 2018 results, fourth grade, 99 total students tested. Out of the 99 students who tested, 63 students scored proficient or above, while 36 students scored below proficient. Of the 63 students who scored proficient or above, 19/63 (30.0%) were looping students and 44/63 (69.8%) were non-looping students. Of the looping students19/30 (63.3%) of the looping students scored proficient or above and 44/69 (63.7%) of non-looping students scored proficient or above. Looping students were 63.3% of the students who scored proficient or above, while non-looping student were 63.7% of the student who scored proficient or above, a difference of 0.4%.

When a two-tailed t-test was conducted, the t-value was -0.68851 and the p-value equaled 0.492774. The mean for the looping group was 708.37 and for the non-looping group the mean was 713.39 with the degrees of freedom 97. This result is not considered statistically significant.

A chi-square test was conducted to compare the number of looping students who scored proficient to non-looping students who scored proficient. When compared, 19/30 (63.3%) of looping students scored proficient compared to 44/69 (63.7%) of non-looping students who scored proficient. A significance level of .10 was used. The chi-square statistic was 0.0017, with a p-value of 0.967034. The proportion of subjects that scored proficient or above did not differ by looping status X^2 (1, N = 99) = 0.0017, p > .10. This result was not significant.

Fifth-grade students of the same kindergarten cohort, 2013-3014, accounted for 105 student test results. There were 101 students who scored proficient or above, and 4 who scored below proficient. Of the 101 students 27/101(26.7%) were looping students and 69/101 (68.3%) were non-looping students. When comparing, 27/30 (90.0%) of looping students scored proficient or above and 74/75 (98.6%) of non-looping students scored proficient or above. Looping students were 90.0 % of the students who scored proficient or above, while non-looping student were 98.6% of the student who scored proficient or above, a difference of 8.6%.

When a two-tailed t-test was conducted, the t-value was 0.21899 and the p-value equaled 0.827093. The mean for the looping group was 747.77 and for the non-looping group the mean was 749.68 with the degrees of freedom 103. There was a 95% confidence level, and this is not considered statistically significant.

A chi-square test was conducted to compare the number of looping students who scored proficient to non-looping students who scored proficient. When compared, 27/30 (90.0%) of looping students scored proficient compared to 74/75 (98.6%) of non-looping students who

scored proficient. A significance level of .10 was used. The chi-square statistic was 4.3923, with a p-value of 0.036101. There is a significant relationship between students who scored proficient or above and looping status X^2 (1, N = 105) = 4.3923, p < .10. This result was significant.

Results from the 2014-2015 kindergarten cohort included 99 student test results from third-grade spring testing (2018). Of the 99 students tested, 63 students scored proficient or above and 36 students scored below proficient. Of the 63 students that were proficient or above, 25/63 (39.6%) were looping students and 38/63 (56.7%) were non-looping. When comparing, 25/33 (75.7%) of looping students scored proficient or above and 38/66 (57.5%) of non-looping students scored proficient or above. Looping students were 75.7% of the students who scored proficient or above, while non-looping student were 57.5% of the student who scored proficient or above, a difference of 18.2%.

When a two-tailed t-test was conducted, the t-value was 2.58928 and the p-value equaled 0.011113. The mean for the looping group was 732.82 and for the non-looping group the mean was 709.77, with the degrees of freedom 96. There was a 95% confidence level, and this is considered statistically significant.

A chi-square test was conducted to compare the number of looping students who scored proficient to non-looping students who scored proficient. When compared, 25/63 (75.7%) of looping students scored proficient, versus 38/63 (56.7%) of non-looping students who scored proficient. A significance level of .10 was used. The chi-square statistic was 3.1429, with a p-value of 0.07626. There is a significant relationship between students who scored proficient or above and looping status X^2 (1, N = 99) = 3.1429, p < .10. This result was significant.

This same cohort's results on the fourth-grade spring administration of the ELA state test (2019) included 84 students, of whom 30 students looped and 54 students were non-looping.

ELA results included 54 students who scored proficient or above. Of the 54 students that scored proficient or above, 23/54 (42.5%) were looping students and 31/54 (57.4%) were non-looping students. Looping students who scored proficient were 23/30 (76.6%) and non-looping students who scored proficient were 31/54 (57.4%). When compared, a higher percentage (by 19.2%) of looping students scored proficient or above.

When a two-tailed t-test was conducted, the t-value was 3.10314 and the p-value equaled 0.002637. The mean for the looping group was 736.42 and for the non-looping group the mean was 711.36, with the degrees of freedom 81. This considered statistically significant.

A chi-square test was conducted to compare the number of looping students who scored proficient to non-looping students who scored proficient. When compared, 23/30 (76.6%) of looping students scored proficient compared to 31/54 (57.4%) of non-looping students who scored proficient. A significance level of .10 was used. The chi-square statistic was 3.1157, with a p-value of 0.07754. There is a significant relationship between students who scored proficient or above and looping status X^2 (1, N = 84) = 3.1157, $p < .10$. This result was significant.

Results from the 2015-2016 kindergarten cohort included 98 student test results from the spring administration of the ELA state test (2019). Of the 98 students who were tested, 38 students participated in the looping program and 60 students did not. Of the 93 students who scored proficient 29/93 (31.1%) of looping students scored proficient and 44/93 (47.3%) non-looping student scored proficient. Looping students who scored proficient were 29/38 (76.3%) and non-looping students who scored proficient were 44/60 (73.3%). When compared, a higher percentage (by 3.0%) of looping students scored proficient or above.

When a two-tailed t-test was conducted, the t-value was 0.78958 and the p-value equaled 0.431722. The mean for the looping group was 726.32 and for the non-looping group the mean

was 720.87, with the degrees of freedom 96. There was a 95% confidence level, and this is considered statistically significant.

A chi-square test was conducted to compare the number of looping students who scored proficient to non-looping students who scored proficient. When compared, 29/38 (76.3%) of looping students scored proficient compared to 44/60 (73.3%) of non-looping students who scored proficient. A significance level of .10 was used. The chi-square statistic was 0.1089, with a p-value of 0.741395. The proportion of students who scored proficient or higher did not differ with looping status, X^2 (1, N = 98) = 0.741395, p > .10. This result was not significant.

Third grade spring results showed that looping students earned higher percentages than non-looping students. Results are depicted in the table below:

Table 7

Spring Third Grade State ELA Proficiency Percentages by Class Type

Cohort	Looping	Non-Looping	Difference
13/14	77.1	73.0	4.1
14/15	75.7	57.5	18.2
15/16	76.3	73.3	3.0

Numbers are represented as percentages

Not included in the table are the 2013-2014 cohort's results on the fourth grade spring ELA test, where non-looping students earned a higher proficiency percentage than looping students by 0.4% and the fifth grade spring test results where non-looping students earned a higher percentage than looping students by 8.6%. Also not included are the 2014-2015 fourth grade spring ELA test results where looping students earned a higher proficiency percentage than non-looping students by 19.2%. Looping students scored higher than non-looping students on

every administration of the ELA state test with the exception of the 2013-2014 cohorts' results for the fourth and fifth grade spring administration of the ELA test.

After completing t-test on the spring test results, significance was found for the 2014-2015 third grade results and fifth grade results, meaning that the looping students had a higher average than the non-looping students. The table below illustrates the t-test results.

Table 8

T-Test Comparison of the Spring Third Grade State ELA Test Results

T-test - Comparing the mean of student scores

Cohort	T-Value	P-Value	Degrees of Freedom	Looping Mean	Non-looping Mean
13/14 113 tested	0.67256	0.502639	110	722.77	717.66
14/15 99 tested	2.58928	0.011113	97	732.82	709.77
15/16 98 tested	0.78958	0.431722	96	726.32	720.87

The t-test had a 95% confidence percentage each time

After conducting chi-square testing, significance was found again with the 2014-2015 third-grade spring test results as well as with the 2013-2014 fifth-grade results and the 2014-2015 fifth-grade spring test results. Each of these groups showed looping students scoring proficient more than non-looping students. The table below illustrates the chi-square test results:

Table 9

Spring Third Grade Chi-Square Comparisons of ELA Results for All Test Takers

Chi-square test - Comparing looping versus non-looping students who scored proficient

Third Grade	Chi-Square Statistic	P-Value	Looping	Non-Looping
13/14 113 Tested	0.2094	0.647273	27 (77.1%)	57 (73.0%)

14/15 99 Tested	3.1429	0.07626	25 (75.7%)	38 (57.5)
15/16 98 Tested	1.10189	0.741395	29 (76.3)	44 (73.3%)
Fourth Grade	Chi-Square Statistic	P-Value	Looping	Non-Looping
13/14 Cohort 99 Tested	0.0017	0.967034	19 (63.3%)	44 (63.7%)
14/15 Cohort 84 Tested	3.1157	0.07754	23 (76.6%)	31 (57.4%)
Fifth Grade	Chi-Square Statistic	P-Value	Looping	Non-Looping
13/14 Cohort 105 Tested	4.3923	0.036101	27 (90%)	74 (98.6%)

Research Question 3

The third question was: *Do students who have participated in looping from kindergarten to first grade outperform non-looping students on the ELA state achievement tests in grades three, four, and five*? The following chart is a comparison of student test results from the spring administration for each of the kindergarten cohorts that included a group of looping students. The chart shows how the percentage of looping students scoring proficient or above compared versus non-looping students on the spring administration of the ELA test from third, fourth, and fifth grade, who scored proficient or above.

Table 10

Proficient and Above Performance Results on the ELA Spring Test

	Third Grade						**Fourth Grade**				**Fifth Grade**	
Category	2017		2018		2019		2018		2019		2019	
	L	N	L	N	L	N	L	N	L	N	L	N
Advanced	11.4	18.7	36.3	13.4	21.0	16.1	10.0	15.9	30.0	12.9	46.6	41.3

Accelerated	31.4	20.0	30.3	17.9	28.9	35.4	30.0	23.1	26.6	25.9	23.3	37.3
Proficient	34.2	32.5	09.0	25.3	21.0	19.3	20.0	24.6	20.0	18.5	20.0	20.0

L = looping students
N = Non-looping students
Results in percentages

For the spring administration of the third-grade ELA state assessment results, looping students had a higher percentage rate in each category with the exception of the advanced category in 2017, the proficient category in 2018, and the accelerated category in 2019 (Table 10). For the fourth-grade comparison, the 2018 results showed only the accelerated category having a higher percentage of looping students scoring higher. All categories from the 2019 results showed all looping students scoring higher in each category. For the fifth-grade results, only the advanced category showed looping students earning a higher percentage than non-looping students.

An independent t-test was completed for each grade level to compare the mean score for performance between looping and non-looping students' results. Third-grade fall results: all three third-grade ELA state assessment results showed looping students had a higher mean than non-looping students. The 2013-2014 cohort for looping had a mean of 687.42 while non-looping students had a mean of 682.69, with a t-test result of 0.52844 (not significant). The 2014-2015 cohort had a mean of 705.74 for looping students and 685.37 for non-looping students, and a t-test result of 2.64138 (significant). The 2015-2016 cohort showed a mean of 708.71 for looping students and 700.71 for non-looping students, a t-test of 0.99521 (not significant). Results showed all three cohorts had a higher mean for looping students, but were only significant for the 2014-2015 looping group from the fall administration of the ELA state assessment.

Third-grade spring ELA state assessment results' mean for the looping students was 722.77 compared to 717.66 for non-looping students in 2013/2014; looping students showed a higher mean with a t-test result of 0.67256, not significant. Results from 2014-2015 showed looping students with a 732.82 mean and non-looping students with a mean of 709.77; looping students showed a higher mean than non-looping students with a t-test value of 2.58928, significant. For the last set of third-grade results, 2015-2016, looping students had a mean of 726.32 compared to 720.86 for non-looping students. Again, looping students had a higher mean with a t-test result of 0.78958, not significant. All three spring results revealed looping students with a higher mean than non-looping students, but significance was only found for the 14/15 cohort.

Fourth grade spring results for the two groups that included data from the fourth-grade ELA state test, the 2013-2014 non-looping students had a higher mean with 713.39 compared to a 708.36 mean for looping students with a t-test result of -0.68851, not significant. The 2014-2015 fourth grade results showed looping students with a higher mean at 736.42 compared to non-looping students with a mean of 711.31 with a t-test result of 3.10314, significant. The fifth-grade results from the 2014-2015 looping cohort showed non-looping students with a higher mean of 749.68 compared to the looping students' 747.77, with a t-test result of -0.21899, which is not significant.

All third-grade results showed looping students with a higher mean than non-looping students. Fourth-grade results were split, with one group showing looping students having a higher mean and one group showing non-looping students with a higher mean. The fifth-grade data set showed non-looping students with a higher mean. Third grade was the only grade level that demonstrated consistent results when comparing the mean results from the ELA state test of

looping students to non-looping students. Significance was found for the 14/15 cohort for both the third and fourth grade.

Research Question 4

The fourth and last research question, which analyzed second through sixth-grade teachers' observations, was: *Do second through sixth-grade teachers observe a difference in classroom performance between students who looped and their non-looping peers, based on completed teacher surveys*? The voluntary survey was distributed through email using a Google form. The survey included nine questions and used a Likert-type scale (always, often, sometimes, rarely, and never) to collect responses. The survey was sent to 26 teachers in grades two through six. Six surveys were completed, and the responses were anonymous.

The first question asked *what grade level are you currently teaching,* with responses coming from four teachers from grades five and six and two reading intervention teachers from the elementary. The second question on the survey, *looping students earn higher scores on reading assessments (STAR/Reading Plus)* had 4 respondents who selected often (66.7%), while 2 of the respondents selected sometimes (33.3%). The third question stated *looping students earn higher scores on math assessments (STAR/ASCEND).* Three of the respondents selected sometimes (50%), while 3 selected often (50%).

The fourth question, *looping students display fewer negative behaviors (off task, disruptive, etc.),* resulted in 1 of the respondents selecting sometimes (16.7%) and 5 of the respondents selecting often (83.3%). The fifth question stated *looping students follow classroom rules,* and *looping students turn in their homework on* time was the sixth question on the survey. Both these questions had 1 respondent who selected sometimes (16.7%) and 5 respondents that selected often (83.3%).

The seventh question on the survey, *looping students earn higher quarterly grades on the report card in reading* and the eighth question *looping students earn higher quarterly grades on the report card in math* both had 2 respondents who selected sometimes (33.3%) and 4 that selected often (66.7%). The ninth and final survey statement, *looping students participate in class discussions,* resulted in 1 respondent that selected sometimes (16.7%), 4 respondents that selected often (66.7%) and 1 respondent who selected always (16.7%).

Table 11

Survey Results

Question	Always	Often	Sometimes	Rarely	Never
Looping students earn higher scores on reading assessments (STAR/Reading Plus)		66.7%	33.3%		
Looping students earn higher scores on math assessments (STAR/ASCEND).		50%	50%		
Looping students display fewer negative behaviors (off task, disruptive, etc.)		83.3%	16.7%		
Looping students follow classroom rules		83.3%	16.7%		
Looping students turn in their homework on time		83.3%	16.7%		
Looping students earn higher quarterly grades on the report card in reading		66.7%	33.3%		
Looping students earn higher quarterly grades on the report card in math		66.7%	33.3%		
Looping students participate in class discussions	16.7%	66.7%	16.7%		

Looping students were said to *often* score higher on reading and math assessments, display fewer negative behaviors, follow classroom rules, earn higher quarterly grades in reading and math, and participate more in class. For the same questions, the remaining responses answered *sometimes,* with the exception of participation which also included *always,* accounting for 16.7 % of the responses.

Summary

This study investigated whether looping from kindergarten to first grade improved student achievement, measured by Ohio's ELA state assessments, besides investigating whether looping students outperform non-looping students on the ELA state assessments in grades three, four, and five.

Data came from a rural Northwest Ohio local school district; 315 third-grade students, 183 fourth-grade students, and 105 fifth-grade students. Of these, 108 third-grade students participated in the looping program from kindergarten to first grade, 30 fourth-grade students participated in the looping program, and 30 fifth-grade students participated in the looping program. Student participants from a traditional classroom assignment included 207 third-grade students, 153 fourth-grader students, and 75 fifth-grader students.

The first two questions in the study focused on third-grade student performance. They compared ELA state test results between students who looped from kindergarten to first grade to non-looping students during the fall and spring administration of the ELA state test. On both administrations of the third grade ELA tests, there were higher percentages of looping students that scored proficient or above than non-looping students. Significance using the chi-square test was found for the 14/15 fall and spring third-grade test and the spring fourth-grade test when comparing results using a t-test. Significance was found for all three cohorts' fall third-grade results as well as the 14/15 spring third and fifth-grade results. Significance was also found for the 13/14 fifth-grade spring results.

The third question's results showed looping students with a higher mean than non-looping students. Fourth-grade results were split, with one group showing looping students having a higher mean and the other showing non-looping students with a higher mean. The fifth-

grade data set showed non-looping students with a higher mean. Third grade was the only grade level that demonstrated consistent results when comparing the mean results from the ELA state test of looping students to non-looping students. Significance was found for the 14/15 cohort for both the third and fourth grades.

The fourth question surveyed second through sixth-grade teachers to see if they observed a difference in classroom performance between students who looped and their non-looping peers. Looping students were said to *often* score higher on reading and math assessments, display fewer negative behaviors, follow classroom rules, earn higher quarterly grades in reading and math, and participate more in class. For the same questions, the remaining responses answered *sometimes,* with the exception of participation, which also included *always* as 16.7 % of the responses.

Chapter V: Conclusions and Recommendations

This chapter summarizes the research, including a discussion, conclusions, and future research opportunities. The first section of the chapter reviews the study, followed by a discussion of the research questions and the conclusion. Finally, recommendations arising from the study are discussed, as well as future research opportunities.

Review of the Study

This study investigated whether looping from kindergarten to first grade correlated with students' ELA test scores in grades three, four, and five, by examining students' state assessment results for ELA achievement beyond the two-year loop. This study also examined teacher feedback on the difference between students' overall performance, academic and behavioral, when comparing looping students to non-looping students. The following questions were investigated:

1. Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the fall and spring administration of the ELA test than non-looping students?
2. Do students who participated in looping from kindergarten to first grade outperform non-looping students on the state achievement tests for English Language Arts in grades three, four, and five?
3. Do second through sixth-grade teachers observe a difference in classroom performance between students who looped and their non-looping peers, based on completed teacher surveys?

4. Do second through sixth-grade teachers observe a difference in classroom performance between students who looped and their non-looping peers, based on completed teacher surveys?

Discussion

Federal and State laws have revised the way in which schools determine reading achievement. With the implementation of the Common Core Standards, and Ohio's Learning Standards, higher expectations have been placed on reading achievement in the primary grades. This is especially true of the competency of third-grade students to read independently (automatic decoding, fluency, and satisfactory comprehension) by the end of third grade (Casbergue, 2017). While many attempts have been made to increase student literacy in schools over the years, the most recent is the Ohio Department of Education's (ODE) Third Grade Reading Guarantee (TGRG). The TGRG was established from state legislation as a part of state testing requirements directed at improving student literacy and students' ability to read grade level material.

Developing a teacher–student relationship has generally been considered a cornerstone of successful schools. According to Hattie's fifteen-year research project, "the effect size for teacher and student relationships was 0.72," which ranked 11 out of 138 influences that Hattie identified as impactful on student learning (Hattie, 2009). Hattie's updated research shows teacher and student relationships having an effect size of 0.52, with a rank of 75 among 252 influences (Hattie, 2018). Looping, the practice of keeping the same cohort of students with the same teacher for an extended period, may be associated with improved teacher–student relationships by providing students and teachers more time together to strengthen the teacher–student bond; which may lead to increased academic achievement and reading scores.

Research Question 1

This research question: *Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the first administration (fall of third grade) of the English Language Arts state test than non-looping students*, was answered by comparing looping and non-looping students from the third grade state ELA test for three cohorts of students who looped from kindergarten to first grade. Results compared the percentage of looping students who scored proficient or above to non-looping students who scored proficient or above. An unpaired t-test with an alpha of 0.05 was used to compare the two groups' means, looping and non-looping, using the ELA state test results to identify if any significant differences existed between looping and non-looping students. In addition, a chi-square test was used to compare students that scored proficient by category; looping versus non-looping at a critical value of .10. Was there a significant difference between the looping students who scored proficient and non-looping students who scored proficient?

In all three comparisons of third grade students' results from fall administration of the ELA state test, looping students earned a higher score compared to non-looping students. Looping students scored higher than non-looping students in the 2013-2014 cohort by 6.6% higher. For the 2014-2015 cohort looping students scored higher than non-looping students by 35.3%, and for the 2015-2016 cohort looping students scored higher than non-looping students by 22.7% higher. After conducting t-tests on the fall ELA test results, only the 2014-2015 cohort showed significance with an increased mean. The chi-square test showed the differences between all the 2014-2015 and 2015-2016 cohorts' results to be significant. Hill and Jones (2018) study included third grade students as a portion of their participants. They found that students who were matched to a particular teacher for a second time scored higher on standardized end-of-

grade tests than they did in their first year with the same teacher, indicating that teacher–student familiarly improves student achievement (Hill & Jones, 2018). Similarly, the results of this study showed that all three cohorts of looping students earned a higher score than non-looping students on the state ELA test. Keeping the same students together and repeating with the same teacher at the next grade level was correlated with positive student achievement results. Results in Sharon and Phillips (2006) study showed that looping students earned higher assessment scores compared to non-looping students in both personal and social development as well as language and literacy, mathematical thinking, scientific thinking, social studies, the arts, and physical development.

It should be noted that this ELA test is created to be a spring assessment for students, so that passing in the fall before the end of the third-grade year indicates a third-grade student has in effect mastered third grade ELA standards by the first of October when fall testing is administered. Also, the third grade test results that are included are after the two-year loop has ended, which may mean that looping at the start of school has lasting effects.

Research Question 2

Research question two was similar to the first question, but investigated results from the spring administration of the third grade ELA test, after students had completed most of their school year: *Do students who participated in looping from kindergarten to first grade have a higher rate of meeting the state-mandated proficiency score during the second administration (spring of third grade) of the English Language Arts state test than non-looping students*, was again answered by comparing percentages of proficiency for looping and non-looping, t-test, and chi-square test.

Results showed a higher percentage of looping students earning a higher score than non-looping students. For the 2013-2014 cohort looping student results were 4.1% higher, for 2014-2015 cohort looping student results were it was 18.2% higher, and for the 2015-2016 cohort looping students had higher results than non-looping students by 3.0% higher. Looping students scored higher than non-looping students on every administration of the spring ELA state test. Results were significant for the 2014-2015 cohort from both the t-test and chi-square test for the third-grade results as well as the fifth-grade results.

Hill and Jones's (2018) and Cistone and Shneyderman's (2004) suggest that looping is a positive instructional approach and a low-cost policy. Cistone and Shneyderman (2004) created two student samples that represented students participating in looping and matching peers who did not participate in looping. An average student in the looping sample outperformed approximately 56% of students in the matching sample on the reading comprehension part of the FCAT (Cistone & Shneyderman, 2004). Similarly, in this study students who participated in a looping cohort were compared to matching students who did not in a looping cohort and had a new class of students and new teacher for the next grade level. For this study, looping students scored higher than non-looping students on both the fall and spring administration of the third grade ELA test.

Students with more negative relationships with their kindergarten teacher had fewer positive work habit marks in lower elementary than peers with more positive relationships. The study suggests that the quality of the teacher–child relationship is a strong predictor of behavior outcomes (Hamre & Pianta, 2001). Similarly, in this study at the start of school, students were proportionally divided amount five kindergarten classrooms, two of which would loop; the same cohort of students would remain with the same teacher for first grade. While the other three

classrooms would move into a new classroom with a different combination of classmates and a new teacher. Even after the two-year loop ended in first grade and students progressed to second and third grade traditionally (new classmates, new teacher) the students who looped earned higher results on both administrations of the third grade ELA state test, fall and spring. Looping may be correlated to this increase in reading achievement. Findings from Larrison's et al. (2012) study included students increasing grade level reading scores from 26% to 63% in three years comparing achievement scores on national assessments of fourth graders.

Research Question 3

While the first two questions investigated third grade ELA results specifically, the third questions expand to further grade levels: *Do students who participated in looping from kindergarten to first grade outperform non-looping students on the English Language Arts state test in grades three, four, and five?* The 2013-2014 cohort's results on the fourth-grade spring ELA test showed non-looping students earning a higher proficiency percentage by 0.4% and the fifth-grade spring test results showed non-looping students earning a higher percentage by 8.6%. For the 2014-2015 fourth grade spring ELA test results, looping students earned a higher proficiency percentage than non-looping students by 19.2%. Results were significant for the 2014-2015 cohort from both the t-test and chi-square test. While significance was found on looping students' scores when compared to non-looping students it was not consistently found at each testing administration. Specifically, for the 2013-2014 cohort results the only time significance was found was for the fifth grade spring test. However, the opposite is true for the 2014-2015 cohort results with every result found to be significant; fall third grade, spring third grade and spring fourth grade. With such a swing in significance, there is a question of which additional variables may have affected the outcomes so consistently? The answer is uncertain,

but one possibility is that the cohort was comprised of a greater number of students who had attended some form of preschool. Another factor, may be at-home support which schools have little control over.

Research Question 4

The fourth and last research question, which analyzed second through sixth-grade teachers' observations, was: *Do second through sixth-grade teachers observe a difference in classroom performance between students who looped and their non-looping peers, based on completed teacher surveys*? Looping students were said to *often* score higher on reading and math assessments, display fewer negative behaviors, follow classroom rules, earn higher quarterly grades in reading and math, and participate more in class. For the same questions, the remaining responses answered *sometimes,* with the exception of participation which also included *always,* accounting for 16.7 % of the responses.

Teacher judgment of kindergarten students' language and literacy skills was somewhat predictive of reading performance in first and third grade (Valdez, 2013). This study reflects Valdez's (2013) deductions that looping with the same teacher may affect reading performance, specifically by third grade. Second through sixth-grade teachers were found to observe a difference in classroom performance between students who looped and their non-looping peers. Looping students were said to *often* score higher on reading and math assessments and *often* earn higher quarterly grades in reading and math. Looping students had a more positive response from teachers than non-looping students.

In a study by Little and Dacus (1999), a school began the approach of looping with six teachers in an effort to have students feel more comfortable at the beginning of the school year. The goal was that by looping teachers would spend less time on rules, benchmark testing, and

identifying students' strengths and needs with respect to learning styles (Little & Dacus, 1999). Through the process, few problems arose, parent support increased, and one parent even requested the same teacher for a third year (Little & Dacus, 1999). The survey results from this study reflect the same positive responses from teachers, from grade level teachers far past the kindergarten to first grade loop (fifth and sixth grade teachers from a separate building). Parents, however, were not surveyed as a part of this study.

Denault's (1997) mixed methods study similarly focused on elementary classroom teachers' perceptions about looping with positive findings that demonstrated the success of a stronger school–home link, sense of community, reduced anxiety between grades, affective gains, and an increased time on task. Surveys showed that 97% of the teachers who responded indicated a strong home–school connection and 100% of the teachers observed increased time on task (Denault, 1997). The current study reflects similar finding in that students were reported to *often* display fewer negative behaviors, follow classroom rules, and participate more in class. For the same questions, the remaining responses answered *sometimes*, except for participation, which also included *always* with 16.7% of responses. The choices *rarely* and *never* were not selected.

Conclusion

Looping students earned a higher percentage on test results on all spring tests, except for the 2013-2014 cohort spring results for both fourth and fifth grade. While significance existed at various points for a cohort, the 2014-2015 kindergarten cohort was the only group that was found to consistently display significant results on both the t-test and chi-square test: fall third grade ELA, spring third grade ELA, and spring fourth grade ELA test results.

The fact that looping students earned higher scores than non-looping on students on all results may be of interest to a school district not only to potentially increase the home-school

connection but also for district reporting. Value-added scores and district early literacy results on ODE's annual report card are directly tied to student achievement and the category a student's score falls into; Basic (545-671), Limited (672-699), Proficient (700-724), Accelerated (725-751), or Advanced (752-863). While significance wasn't found for all comparisons, it was found to have significance in six out of the nine comparisons when comparing looping students ELA scores to non-looping students ELA scores after the loop ended.

Recommendations

Recommendation Number One

Elementary schools should consider looping as a potential low-cost form of school improvement. With teacher willingness and parent support Rocklin Unified School District, implemented looping as an explicit instructional approach (Capp & Elliott, 2003), which resulted in parents requesting the looping classroom. This led to more looping classrooms being established at each grade level, kindergarten through six grade. Parents felt strongly that the teacher–student relationships, teacher–parent relationships, student-to-student relationships, and parent–child relationships were essential to their child's successful learning experience (Chirichello, & Chirichello, (2001).

Recommendation Number Two

Before beginning a looping program, school districts will need to prepare teachers including professional development on the next grade level the teacher will teach as they move up with their cohort of students. This professional development includes the scope and sequence of the grade level curriculum, any mandated state and/or district testing at the new grade level and professional development on grade level standards included on student report cards. In addition, the scope and sequence of the year may look different since the teacher has previously

worked with the students for a year. When teachers change class levels, it can result in planning instruction in new ways, developing new programs, and gaining a better understanding of the developmental needs of children from different age groups (Carlyon, 2013).

Recommendation Number Three

Schools who wish to begin looping must reach out to parents and present the concept. Parents need to have an understanding of the potential benefits of looping with the same cohort of students and teacher to support a change from traditional student promotion to the next grade level. Parents of looping children have a positive attitude and more optimistic perceptions of what is taking place in the classroom (Nichols & Nicholas, 2002). Findings from the interviews of several teachers, visits to their classroom, and responses to the survey across the United States were positive and demonstrated the success of a stronger school–home link, sense of community, reduced anxiety between grades, affective gains, and increased time on task (Denault, 1997). In addition, parents need to understand that if a poor relationship does form between the student and teacher that they can "opt out" of the looping program and move into a new class of students for the next school year. Denault (1997) reported that a drawback of looping is the potential for a child to be with a poor teacher for more than one year and a possible mismatch between students and a teacher. It is important to allow flexibility within the looping model.

Limitations

There are several limitations to this study. Students who looped had a new teacher for second grade and beyond, so this was factored into the looping students' education before they took the third-grade state assessment (a new teacher in both second and third grade). Additionally, the delivery format of the state test has changed. Assessments were initially wholly administered in a paper/pencil format, but more recently were administered online using an

electronic device (computer or iPad). A few students, exceptions identified as having special-needs, may still test using the paper/pencil format as an accommodation.

Students' individuality and uniqueness is a limitation of this study. Factors such as background, home life, intelligence (IQ), and gender are variables that influence reading achievement. Students who attended preschool versus students who had no exposure to school before kindergarten is a further limitation of the study. The fifth-grade students included in the study attended the middle-school building (which housed grades five through eight), so the entire building dynamic was different from the elementary building (kindergarten through grade four); such as a different principal, departmentalized instruction, and available student activities. While the elementary and middle schools operate on the same campus, they have a different set of expectations, schedules, and testing requirements. In addition, during the second year of the loop the class combination may change as students have withdrawn and new students have enrolled to the district.

Teacher quality, both for looping and non-looping teachers, is a limitation of this study. Student and teacher personality conflicts are also a limitation. The survey has limitations in that completion was voluntary and the responses might have been subjective. The student-teacher relationship could not be measured for each student participant in the study.

All test administrators are required to participate in a standard training for test administration; however, testing time, delivery of directions (rate, tone, and inflection) and number of students in the testing group vary.

Looping in and of itself may not be the cause of students scoring higher on the ELA test. Other variables may include teacher experience, student home-life and socioeconomic status, and special student needs that arise during the year. Looping in and of itself may not be the cause of

students scoring higher on the ELA test. Other variables may include teacher experience, student home-life and socioeconomic status, and special student needs that arise during the year.

Future Research Opportunities

There are several areas for further research opportunities. A suggestion from the current study would be to investigate growth yearly to measure progress in comparing looping students to non-looping students. Benchmark data could be compared to drill down on yearly progress up until third grade. Research could also be conducted at further points through these existing cohorts' educational career to compare looping and non-looping students' progress; students identified as gifted, students in advanced placement courses, students identified as special needs, student placement with respect to grade point average at graduation. Further research could also include extending the loop to include the primary grades, K-2, and beginning a new loop in grade during those critical developmental years in the elementary. Juel (1988) conducted a longitudinal study of 54 students from first through fourth grades to determine whether the same students remain poor readers and writers, year after year, and what factors prevent students from improving. Evidence from the study indicated that students who were poor readers in first grade usually stayed poor readers by the end of fourth grade. Poor readers started first grade with minimal phonemic awareness. While poor readers made worthwhile gains in phonemic awareness in first grade, they were unable to attain the maximum score on the phonemic awareness test until the end of third grade (good readers had reached the same level by the end of first grade). Future research should continue to investigate looping before third grade (kindergarten to first, first to second, second to third). In addition, research could include a loop that last longer than two-year (looping kindergarten to third grade). Research could also include a study of the impact on students for specific sub-groups such as students identified with special

needs on an individual education plan, boys versus girls, socioeconomic status, students identified as English Learners, gifted students on a written education plan or a written acceleration plan, student on a reading improvement and monitoring plan, students on 504 plans, and so forth.

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APPENDIX A

University of Findlay

Institutional Review Board

Date: **October 31, 2019**

To: John Gillham

CC: Angela Belcher

RE: Effects of Looping, Kindergarten to First Grade, and Performance on State Reading Tests in Third, Fourth and Fifth Grades; A Case Study

Project Status: Exempt from review

The University of Findlay Institutional Review Board (IRB) has completed its review of your project utilizing human subjects and has granted authorization. This study has been approved for **Exempt Status**. The project has been assigned the number **1385**.

Projects deemed exempt from IRB review are also exempt from Continuing Annual Review. Therefore, you will not need to file a progress report to continue the study over a twelve-month time period.

Please note that if any changes are made to the present study, you must notify the IRB immediately. Understand that any proposed changes may not be implemented before IRB approval, in which case you must complete an **Amendment/Modification Report**.

Following the completion of the use of human subjects, the primary investigator must complete a **Certificate of Compliance form** indicating when and how many subjects were recruited for the study.

Please refer to the IRB policy and procedures manual for additional information. Please include the project number on any other documentation or correspondence regarding the study.

Thank you very much for your cooperation. If you have any questions, please feel free to contact IRB at (419) 434-4640 or email irb@findlay.edu.

Sincerely,

Jaymelee Kim, Ph.D.
Vice Chair, Institutional Review Board

Cc: IRB Office

APPENDIX B

504 Fernwood Street | Delta, OH 43515

PIKE • DELTA • YORK
P | D | Y
LOCAL SCHOOL DISTRICT
EST. 1966-1967

PDYS.org

September 24, 2019

Angela Belcher
400 E. Gamble Road
Fayette, Ohio 43521

Dear Mrs. Belcher:

I am in receipt of your request to utilize data from the Pike-Delta-York Local School District to complete your Educational Doctorate program through the University of Findlay. Your study, the *Effects of Looping, Kindergarten to First Grade, and Performance on State Reading Tests in Third, Fourth, and Fifth grades; a Case Study* sounds very interesting.

To complete your study, you requested to receive stored data within the district's Education Management Information System (EMIS) and the opportunity to conduct an anonymous teacher survey. Furthermore, you indicated your study would not identify specific students and all individual results will remain confidential and anonymous.

I am granting you permission to complete your doctorate dissertation study, with the above stipulations, utilizing the Pike-Delta-York information and procedures requested.

I look forward to seeing your study results.

Sincerely,

Ted Haselman, Ed. D.
Superintendent

APPENDIX C

Teacher Survey

1. What grade level are you currently teaching?

2. Students who participate in a looping classroom earn higher scores on reading assessments (STAR/Reading Plus).
   a. always b. often c. sometimes d. rarely e. never

3. Students who participate in a looping classroom earn higher scores on math assessments (STAR/ASCEND).
   a. always b. often c. sometimes d. rarely e. never

4. Students who participate in a looping classroom display less negative behaviors (off task, disruptive, etc.).
   a. always b. often c. sometimes d. rarely e. never

5. Students who participate in a looping classroom understand consistently follow classroom rules.
   a. always b. often c. sometimes d. rarely e. never

6. Students who participate in a looping classroom turn in their homework on time.
   a. always b. often c. sometimes d. rarely e. never

7. Students who participate in a looping classroom earn higher reading grades on their quarterly report card.
   a. always b. often c. sometimes d. rarely e. never

8. Students who participate in a looping classroom earn higher math grades on their quarterly report card.
   a. always b. often c. sometimes d. rarely e. never

9. Students who participate in a looping classroom actively participate in class discussions.

   a. always b. often c. sometimes d. rarely e. never