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Looping and Academic Achievement in Elementary Schools

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Looping and Academic Achievement in Elementary Schools

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by

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ABSTRACT

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The purpose of the quantitative study was to determine if there was a significant difference in the academic performance of students at the elementary level who loop compared to those who do not. This study also assessed if there was a significant difference in academic achievement among subgroups in students who loop compared to those who do not. A quantitative, ex post-facto, comparative design was used to analyze data to determine if there is a signficiant relationship between looping and academic achievement for elementary students. The scores of students enrolled in two looping classrooms at two schools were compared to those of two nonlooping classrooms at two schools. The data that were analyzed included students' reading scores on the Developmental Reading Assessment (DRA), math benchmark scores, and a district writing assessment. The results of the quantitative study revealed that students who participated in looped classrooms scored significantly higher on the math benchmark than students who participated in nonlooped classrooms. However, there was no significant difference in reading or writing benchmark scores between students who participate in looped classrooms compared to students who participated in nonlooped classrooms. The results also revealed that there was a significant difference in writing scores between males and females in nonlooped classrooms, with females scoring significantly higher than males. However, there was no significant difference in writing scores between males and females in looped classrooms. In addition, no significant difference was found between males and females in looped and nonlooped classrooms in either reading or math scores. Finally, there was a significant difference in math scores

between minority and nonminority students in nonlooped classrooms, with nonminority students scoring significantly higher than minority students. However, there was no significant difference in math scores between minority and nonminority students in looped classrooms. In addition, no significant difference was found between minority and nonminority students in looped and nonlooped classrooms in either reading or writing scores.

DEDICATION

I dedicate this dissertation to all of those who have supported me throughout this journey. To my husband, Brandon, who gave me the strength and encouragement I needed. I will be forever grateful to you for pushing me through when I felt like giving up. You are my biggest fan and you always believe in me. To my son, Blake, my greatest blessing. I am so proud to be your mom; you make me a better person. It has been a joy to watch you grow these past two and a half years and I cannot wait to see what life has in store for you. You will do amazing things!

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Chapter 1. Introduction

Educators and administrators continually look for practices and strategies to implement in the classroom to increase academic achievement. Although educational policy decisions are made at the state and federal levels of our government, educational leaders feel the brunt of decision making at the local level (Findley, 2018).

The need to increase student achievement scores has increased since *A Nation at Risk* was released in 1983 (Findley, 2018). This idea continued for years until the *No Child Left Behind (NCLB)* Act reauthorization of Elementary and Secondary Education Act (ESEA) passed in 2002. This act expanded the federal government's control over the public education system. Elements found within NCLB have forced school leaders to change how they think about school reform and programs to help with student achievement. NCLB determined standardized test scores would serve as the main measure of quality schools and student performance. NCLB also required school districts to report progress for specific subgroups within the population. The ESEA reauthorization, Every Student Succeeds Act (ESSA) passed in 2015, required states to report achievement results for subgroups (NASSP, 2020).

For students to become productive and contributing members of society, they must develop competency in areas, including reading, writing, and math (Danley, 2012). Yet, some students do not meet the basic standards in these core academic subjects, while others cannot write or read on grade level, or solve basic math problems. In addition, there continues to be an achievement gap between White, Hispanic, and Black populations.

With the urgency to narrow the achievement gap, school leaders began researching and implementing instructional strategies (Findley, 2018). One strategy that merits more research is looping. Looping is an instructional strategy that can be used to boost academic achievement and

narrow the achievement gap for students, while building strong relationships within the classroom (Findley, 2018; Minkel, 2015; Phelps, 2016).

Looping refers to the practice of keeping the same teacher with their students for 2 or more consecutive years (Laboratory at Brown University [LAB], 1997; Thomas, 2014). Attention to looping has increased in recent years, but the idea behind teachers staying with their students for more than 1 school year is not new (Grant et al., n.d.). This practice is growing in its use in classrooms. The recent interest in looping prompted researchers to reexamine the effectiveness of its structure. According to Koester (2000), looping is gaining ground in education as educators and society recognize the need for schools to provide a stable structure, as well as increase student knowledge. Looping provides a way to promote long-term teacher and student relationships. Kurtz (1998) found that looping also builds bonds between students and teachers and provides a seamless continuation of learning as students' progress through grade levels. Most studies are qualitative and document positive experiences and support for looping.

Statement of the Problem

The purpose of the quantitative study was to determine if there was a significant difference in the academic performance of students at the elementary level who loop compared to those who do not. This study also assessed if there was a significant difference in academic achievement among subgroups in students that loop compared to those that do not. This study was conducted in four elementary schools in one school district in East Tennessee. The scores of students enrolled in two looping classrooms at two schools were compared to those of two nonlooping classrooms at two schools. The data that were analyzed included students' reading scores on the Developmental Reading Assessment (DRA), math benchmark scores, and a district writing assessment. The scores reported for all students on the assessments were examined as the

primary dependent variable. An additional examination explored the performance levels of subgroups. The performance of males in comparison to females among all groups was examined, as well as a comparison of minorities.

Research Questions

The following research questions were used to guide this study:

RQ1: Is there a significant difference in reading scores between students participating in looping classrooms and students participating in nonlooping classrooms?

RQ2: Is there a significant difference in math scores between students participating in looping classrooms and students participating in nonlooping classrooms?

RQ3: Is there a significant difference in writing scores between students participating in looping classrooms and students participating in nonlooping classrooms?

RQ4: Is there a significance difference in reading scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

RQ5: Is there a significance difference in math scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

RQ6: Is there a significance difference in writing scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

RQ7: Is there a significance difference in reading scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

RQ8: Is there a significant difference in math scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

RQ9: Is there a significant difference in writing scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

Rational and Significance of the Study

Klinzing (2019) found that quantitative and qualitative research supports looping and referenced a study that found looping can improve test scores, with the largest gains found for minorities. Upon review of current research related to looping and academic achievement, there is a gap in quantitative research related to comparing looped and nonlooped students and academic achievement (Bogart, 2002; Thomas, 2014; Williams-Wright, 2013). Lloyd (2014) noted that while more schools are implementing looping, research that provides concrete, empirical data to support looping related to academic and social benefits is lacking. According to Findley (2018), a gap exists in the analysis of looping and its relationship to narrowing the achievement gap, specifically for subgroups. Therefore, this study served to measure the relationship between looping and academic achievement.

The concept of looping has been in the field of education for centuries. Qualitative research supports the concept of looping and has found many advantages for students and teachers (Klinzing, 2019; LAB, 1997). However, there is less quantitative research to assess the benefits or disadvantages of looping, especially related to academic achievement (Thomas, 2014). This quantitative study adds quantitative data on the academic achievement of students in looped classrooms compared to those in nonlooped classrooms to the existing literature. This

study also adds research information related to the relationship between looping and specific subgroups.

Several stakeholder groups may benefit from this study on the relationship between looping and academic achievement. Using this study's results, administrators, and teachers may be able to leverage findings to determine how to best deliver instruction in elementary schools.

Definitions of Terms

Key terms are defined to assist the reader in understanding terminology and concepts in the study. The following terms are defined by use in this study.

Accountability: There are three main types of accountability systems in education: compliance with regulations, adherence to professional norms, and results-driven (Anderson, 2005). Compliance with regulations requires educators be accountable for adherence to rules and accountable to the bureaucracy. Within adherence to professional norms, educators are accountable for adherence to standards and accountable to their peers. Finally, the results-driven system requires educators to be accountable for student learning and accountable to the general public.

Achievement Gap: In education, the achievement gap refers to the disparities among student achievement that correspond to the racial, socioeconomic, and linguistic backgrounds of students (Noguera, 2009). Achievement gaps occur when one group of students outperforms another group and the difference in the average score for the two groups is statistically significant (NAEP, 2020).

Developmental Reading Assessment (DRA): The DRA is an individualized reading assessment that enables teachers to evaluate growth in student reading performance over time. The DRA

helps teachers to identify students' independent reading level by assessing students' oral reading fluency and comprehension (Beaver & Carter, 2019).

Looping: Looping is the practice of allowing teachers to keep the same students over 2 or more years (Grant et al., 1996).

Minorities: Recognized ethnic minorities include African Americans, Hispanic Americans, Native Americans, and Asian Americans (TDOE, n.d.). Students are assigned to historically underserved student groups, including Black, Hispanic, and Native American students (BHN) (TDOE, 2019a).

Subgroups: In education, subgroups generally refers to any group of students who share similar characteristics, such as gender identification, racial or ethnic identification, socioeconomic status, physical or learning disabilities, language abilities, or school-assigned classrifications (Great Schools Partnership, 2015). According to the Tennessee Department of Education (2019a), students are assigned to the following historically underserved student groups as applicable:

- Black, Hispanic, and Native American students (BHN)
- English learners (EL)
- Economically disadvantaged students (ED)
- Students with disabilities (SWD)

According to the Tennessee state report card for the 2019-2020 school year, 1,014,502 students were enrolled in Tennessee Public Schools (2019b). Of these students, 0.4% were American Indian/Alaska Native, 2.4% were Asian, 24.2% were Black/African American, 11.8% were Hispanic, 0.2% were Native Hawaiian/Pacific Islander, and 61% were White. Of those 1,014,502 students, 30.8% were ED, 5% were EL, and 13.6% were SWD.

Delimitations and Limitations

The study was limited to a set of mathematics, reading, and writing scores comparing looping classrooms to nonlooping classrooms. The mathematics data are limited to a district-wide math assessment. The reading data are limited to the Developmental Reading Assessment (DRA), which is a measurement for student's reading engagement, oral reading fluency, and comprehension (Beaver & Carter, 2019). The writing data are limited to a district-wide writing assessment, which is scored by teachers using a district-created writing rubric. These specific assessments are not used in all states or elementary schools, limiting the findings of the study.

In addition, the teacher effects on student outcomes is a limitation of the study. This study did not address teacher quality. It was assumed that all teachers in the study were capable, knowledgeable, and comparable in skill and ability. Teachers selected for the study were chosen because they were involved in a looping cycle during the time of the research study.

This study was limited by the assumption that looping positively affects academic achievement. This study was also limited by the assumption that looping would have a positive impact on student subgroups. Factors other than being placed in a looped classroom could have also had an impact on student achievement.

This study was delimited to four elementary schools within a single school district in East Tennessee. In these schools, a specific cohort of students who had experienced looping were followed. These students were assigned to preexisting groups, either looped or nonlooped classrooms. The results cannot be generalized, but can be suggested.

It was assumed that these data sources reported for all elementary students were accurate and an appropriate measure of student achievement. The researcher also assumed that the assessments were administered in a setting that was conducive to ideal performance by all students. Environmental factors such as lighting, flexible seating, classroom temperature, and

room arrangement were assumed to be suitable. Incidentals such as test stress, student worry of failure, student and teacher behavior, and other distractions were assumed to have been minimized throughout the testing window.

Chapter Summary

Chapter 1 provides an introduction to the study, which assessed the potential relationship between looping and student achievement. The introduction included information related to the practice of looping in the classroom. The background of the practice of looping presents the need for further analysis of the potential relationship of looping and academic achievement outcomes.

Chapter 2. Review of Related Literature

Major Pertinent Theories

Understanding the topics of motivation and learning, the influence of classroom environments, and student-teacher relationships with regards to student outcomes is shown though the lens of different theoretical frameworks (Koca, 2016; Tipton, 2017), including Maslow's Hierarchy of Needs, Motivation Theory, Self-Determination Theory, and Attachment Theory. These theoretical frameworks connect classroom practices and student outcomes. (Opdenakker et al., 2012). These theories help provide frameworks for explaining the effects of classroom environment factors on a student engagement and academic achievement.

Maslow's Hierarchy of Needs Theory

In 1954, Maslow introduced his theory about how people satisfy their needs (Gawel, 1997). According to his theory, there are five levels of needs: Physiological, Safety, Love and Belonging, Esteem, and Self-Actualization. There is a pattern of needs recognition and satisfaction, and people tend to follow the same pattern. Maslow also theorized that people cannot pursue the next higher need until their current need is satisfied.

Maslow did not apply his theory to the educational setting; however, his earlier works pointed to a specific interest in how motivation impacts learning and the learning experience (Milheim, 2012). The lowest level, physiological needs, included basic needs, such as food, water and air (Gawel, 1997). In the classroom, these would be basic needs students need to be successful, such as books and materials (Milheim, 2012), as well as meals before and during school and access to a school nurse, when needed (Findley, 2018).

The second level, safety, included security, stability, and protection (Gawel, 1997). Translated to the classroom setting, this idea would include the classroom and school-wide discipline policies (Findley, 2018).

The third level, love and belonging, included feeling loved and a sense of fitting in (Gawel, 1997). In the classroom, this would be collaboration between peers, a sense of community within the school and classroom, the presence of a teacher, as well as positive relationships with teachers and classmates (Findley, 2018).

The fourth level, esteem, included self-respect and respect of others (Gawel, 1997). Students achieve self-esteem in the classroom through feedback, an inclusive classroom climate, and opportunities to show ability (Findley, 2018).

The fifth level, self-actualization, is when one fulfills their own potential (Gawel, 1997). Students reach the fifth level in the classroom when they want to improve on their own success and actively engages in instruction (Findley, 2018).

For students to reach the highest level of self-actualization, they must have the lower four levels met (Findley, 2018). Self-actualization students learn through intrinsic learning and intrinsic learning involves the processes that help students become all they are capable of becoming (Milheim, 2012). Teachers have important roles as they help students work toward self-actualization. Motivation research found that students rely on the structure and support from teachers as well as teachers' ability to help them feel successful academically (Fredriksen & Rhodes, 2004). Teachers' expectations, beliefs, and behaviors influence the quality of relationships with students. The extent that teachers are able to balance the need for structure with students' need for autonomy impacts students' need for independence and motivation.

Another important aspect in helping students reach self-actualization is the positive and supportive relationship between students and teachers (Findley, 2018; Milheim, 2012). A teacher can also help students work towards self-actualization by knowing and understanding each child's individual learning goal and providing tools and resources to help support that student in meeting their learning goals.

Motivation Theory

Motivation within the educational setting includes needs, drives, goals, aspirations, interests, and affects (Lazowski & Hulleman, 2016). Research in educational psychology found that student motivation is essential for learning. Motivated students learn more, persist longer, produce higher quality work, and score higher on assessments, especially when the motivation is intrinsic, versus extrinsic. Motivation in schools has been shown to have significant impacts on academic learning, self-esteem, self-efficacy and school readiness (Koca, 2016). In addition, prior research has shown that motivation is an important predictor of student outcomes, including self-efficacy, academic engagement, and academic achievement (Opdenakker et al., 2011).

According to Koca (2016), motivation is significantly related to students' standardized achievement scores. Students with intrinsic motivation received higher reading and math achievement scores compared to classmates with extrinsic motivational orientations.

Teacher-student relationships play a key role in the development of competencies in early school-age years (Koca, 2016). Teachers can create a classroom environment that kindles students' motivation and learning. In addition, the relationship between the teacher and student help students develop social, emotional, and academic skills. Positive student-teacher relationships in a warm classroom environment can help students successfully adapt to school,

increasing their motivation to learn. Even more, positive relationships within a safe and supportive environment can enable students to open up and take academic risks.

Koca (2016) noted that when children enter school or transition to the next grade level, they encounter challenges, such as creating relationships with peers and adults. Student-teacher relationships play a key role in the development of competencies in elementary school, including social, emotional, and academic skills. Prior research has found a significant relationship between student adaptive motivation for academics and social factors within the classroom, including relationships, teacher support, and teacher practices that foster respect. In these classrooms, teachers encouraged students to focus on the task and provided feedback, teachers perceived learning as an active process, incorporating positive interactions, understanding versus memorization, and student engagement. Positive student-teacher relationships can contribute to a classroom environment that learners perceive to be inviting, which facilitates adaption in school, therefore increasing students' motivation to learn.

Self- Determination Theory

Self-determination theory expands upon the work of social motivation theory and differentiates the types of motivation (Deci & Ryan, 2008). According to Koca (2016), self-determination theorists claim that children begin to value behaviors that they see reinforced, both their own behaviors and those of significant others within their social environments, including teachers and families. The most central difference in self-determination theory is between autonomous motivation and controlled motivation. Autonomous motivation includes intrinsic motivation, while controlled motivation includes external regulation. When people are autonomously motivated, they experience self-endorsement of their actions. When people are

controlled, they experience pressure to think, feel, or behave in certain ways. Both autonomous and controlled motivation help to energize and direct one's behavior.

Self-determination theory suggests that individuals have basic psychological needs for: competence or self-efficacy, autonomy, and relatedness (Virtue, 2014). When these needs are met, it supports motivation, self-regulation, personal well-being, and high-quality learning (Koca, 2016). Relationships are a key factor that encourage a student's wellbeing and personal growth; therefore, teachers are a key factor in helping students achieve these psychological needs (Cherry, 2019). The student-teacher relationship is an important and powerful motivator for the development of competence and autonomy (Koca, 2016). Research indicated that students who believe they are academically competent are more likely to be interested in academic and school tasks. In addition, when teachers support student's basic psychological needs and provide a safe classroom environment, they are promoting healthy student-teacher relationships. Within this type of environment, students reported increased levels of competence, autonomy, and positive relatedness.

Students experience competence when they are challenged and given timely feedback (American Psychological Association) [APA], 2004). According to Cherry (2019), competence included the ability to master tasks as well as the ability to learn new skills. Students are more likely to take actions to meet their goals when they feel that they have the skills needed to help them succeed.

When students are supported to explore, take initiative and develop and implement solutions to problems, they experience autonomy (APA, 2004). Autonomy provides students the feeling that they are in control of their behaviors and goals (Cherry, 2019). Autonomy is

important, as it enables students to feel that their actions will result in a change. This directly impacts their feelings of self-determination.

Finally, relatedness or connection is felt when students have a sense of belonging or attachment to other people (Cherry, 2019). Students experience relatedness when they believe others listen and respond to them (APA, 2004). When these three needs are met, students are more intrinsically motivated.

When students perceive the goal of education is to obtain external rewards, they perform more poorly, think of themselves as less competent, and report greater anxiety (APA, 2004). Deci and Ryan (1999) found that the use of external rewards decreased motivation for a task and led to a negative effect on intrinsic motivation.

In the classroom, self-determination can be built to help students feel more engaged and motivated (Cherry, 2019). This can be fostered using teamwork and allowing students to take an active role in their learning. Niemiec and Ryan (2009) noted several studies that found learning tasks that are perceived as autonomy supportive are conducive to students' intrinsic motivation. It is also vital to provide students with meaningful feedback, while providing support and encouragement. Finally, teachers should be careful not to overuse extrinsic rewards. Too many external rewards can undermine intrinsic motivation, while too few may cause students to feel unappreciated. Instead, teachers can provide unexpected, positive feedback when students perform well. This will help improve competence.

One of the main components of self-determination theory is social connectivity (Cherry, 2019). When students have strong social relationships, those relationships foster motivation and well-being. A strong social support offers student's opportunities for growth, which can help students develop a self-determined perspective.

Attachment Theory

Attachment theory is based on the enduring affectionate bond that connects one person to another (Bergin & Bergin, 2009; Watson, 2018). The attachment theory in the classroom is based upon the bond between a child and the primary caregiver (Kennedy & Kennedy, 2004). The foundational assumption of attachment research indicates that humans develop a secure attachment to their primary caregiver when that person responds in a caring way, ensuring protection from environmental dangers and provides a sense of security. Specific attachment behaviors include adults attending to a child's needs, responding to a child's signals, and looking toward the child (Bergin & Bergin, 2009). When students have a secure attachment, they are free to explore the world around them. When this attachment is not available and the child is unable to use the caregiver as a secure base, an insecure attachment is developed (Kennedy & Kennedy, 2004; Watson, 2018). This is classified as either an anxious-ambivalent attachment or an anxious-avoidant attachment. Each attachment classification impacts emotional regulation for managing affect, events, and relationships throughout life.

Children with secure attachments are more likely to develop an internal representation that views others as supportive, helpful, and positive (Kennedy & Kennedy, 2004). They are also more likely to view themselves as competent and worthy of respect. Securely attached children relate more positively to peers and adults, engage in more complex plan, show more flexible and socially appropriate control, show more focused attention and participation in school, and earn higher grades (Kennedy & Kennedy, 2004; Watson, 2018). In addition, older children report more satisfying relationships and increased trust in others. Finally, they exhibit a more positive view of self and can cope in stressful situations.

The development of secure attachments extends outside of the family environment, if the relationship includes provision of physical and emotional care, a consistent presence in one's

life, and an emotional investment in the individual (Kennedy & Kennedy, 2004). Therefore, relationships with teachers provide students a place to explore outside of their home base and provide a safe place during stress.

Children's socioemotional well-being is critical to school success, and attachment forms the foundation (Bergin & Bergin, 2009). Therefore, educators can be more effective when they understand how attachment impacts their students. The quality of the teacher-student relationship may be the most important factor for positive adaptation at school (Kennedy & Kennedy, 2004; Watson, 2018). Students who experience positive and supportive relationships with teachers show greater social competence with peers and adults, participate more frequently in supportive social networks, have fewer behavior problems and demonstrate higher achievement and academic performance when compared to peers with insecure relationships. According to Watson (2018), students with a history of secure attachment performed well in all measures in elementary school, and attachment security related positively to math and reading performance.

The classroom environment can support attachment when the student views the teacher as sensitive, accessible, and responsive to their needs (Kennedy & Kennedy, 2004). To be effective, teachers must connect with and care for students with warmth, respect, and trust (Bergin & Bergin, 2009). This ensures anxiety-free academic and social learning. For at-risk students, teachers may be their only positive, supportive adult role model. During a time of increased accountability, student-teacher relationships is central to raising achievement.

According to Bergin and Bergin (2009), studies have found that teachers to students in first through fifth grade who were characterized as emotionally warm and sensitive had greater growth in math and reading abilities. In addition, studies in first grade classrooms found emotionally supportive teachers had students who were more likely to engage in academic

activities, experience positive relationships with peers, and avoid negative behaviors. Even more, close student-teacher relationships led to higher scores on achievement tests, more classroom engagement, less retention, and fewer special education referrals. Even students whose readiness scores indicated a high risk for retention or special education referral were less likely to be retained or referred if they have a close student-teacher relationship in kindergarten.

Student-teacher relationships are important as they indicate long-term well-being in school (Kennedy & Kennedy 2004). A study noted by Kennedy and Kennedy (2004) found that positive student- teacher relationships in first grade were linked to increased engagement, effort, and attention in second grade and increased test scores in third grade among low-SES students. Evidence suggested that secure student-teacher relationships predict increased knowledge, higher test scores, greater motivation, fewer retentions and special education referrals than insecure relationships.

History of Looping

Looping is an educational strategy in which groups of students are together with the same teacher for 2 or more years (LAB, 1997; Phelps, 2016). Grant et al. (1996) coined the term "looping." Looping has been around for many years, but has taken on different forms (LAB, 1997). The strategy of looping dates to the1900s with the Waldorf Schools in Germany, led by Rudolph Steiner, an educator and philosopher (LAB, 1997; Williams-Wright, 2013). Steiner developed the Waldorf Schools to educate the children of the workers at the Waldorf Astoria cigarette factories (Grant et al., 1996; Thomas, 2014).

Steiner posited that long-term teacher relationships were beneficial for students (LAB, 1997; Weaver, 2015). Waldorf education focused on the whole child and was based on the understanding of human development that addressed the needs of growing children (Danley,

2012). Students in Waldorf Schools stayed with the same teacher for 8 years (Grant et al., 1996). This timeframe allowed the students and teachers to know each other very well and allowed the teacher to find the best way of helping individual students learn (Murphy, 2002). In addition, the additional time allowed teachers to learn about the child's prior knowledge, learning styles, behavior and interests (Pecanic, 2013). According to Danley (2012), these long-term relationships can result in an emotional and intellectual climate that encourages risk taking, thinking, and engagement. The teacher would, in effect, serve as a third parent to developing students and become like an additional family member for most families in the classroom. In Germany, today, students stay with their teachers from grades one to four. The looping of students and teachers in the Waldorf Schools led to the opening of over 250 schools in North America since 1928 (Bamford & Utne, 2020).

The concept of looping is common in European and Japanese schools (Koester, 2000; Thomas, 2014, Williams-Wright, 2013). According to Grant et al., (1996), Japan and Israel have multiyear "family groupings" in the lower grades, and multiyear student-teacher relationships by content area in secondary grades. For example, a secondary math teacher may teach the same student algebra, geometry, and other content areas, while the science teacher may teach life sciences, chemistry, and physics. Japanese culture emphasizes student-teacher relationships above specialization of teachers in specific grade levels or content areas (Smith, 2010).

Throughout Denmark, elementary students and teachers spend multiple years together (Smith, 2010; Weaver, 2015). In China, homeroom teachers remain with the same group of students for 3 year rotations in elementary, middle, and high school. China's practice of grouping students in 3 year rotations facilitates strong relationships between students and teachers. Teachers in these countries recognize the importance of developing strong relationships and

understand the time it takes to build these bonds. These relationships enable teachers to motivate students to want to achieve and provide students with a more personalized approach to teaching and learning.

The United States Department of Education addressed looping in 1913 (LAB, 1997; Thomas, 2014). In the memo issued by the department, they questioned whether students should change teachers each year or remain with the same teacher for 2, 3, or 4 years, to allow teachers to get to know students and build onto prior knowledge. The memo discussed advantages to the classroom structure of looping, many of which teachers today notice (LAB, 1997). Advantages addressed in the memo included savings of time, both at the end of the first year as well as at the beginning of the second year, the importance of a teacher being a specialist for children instead of in a subject area, and parents having a better understanding of school due to the relationship with the teacher (Grant et al., 1996).

The concept of looping goes back as far as the one room school house (Barger, 2013; Findley, 2018). From the early 1600s through the mid-1800s, most Americans who attended formal schools in the United States received their education in a single room schoolhouse environment. In one-room schoolhouses, students of different ages learned from one another and their teacher (Caauwe, 2009). There were 190,000 one-room schoolhouses in 1919, and there are now fewer than 400. As one-room schoolhouses shut down, the concept of multi-year teaching was replaced with the practice of teachers staying with groups of students for only one year. This followed the recommendation of Horace Mann, who purported the separation of schools into graded classrooms was appropriate (Findley, 2018).

The application of looping in the United States has been inconsistent. In the 1970s, Deborah Meier, an educator and author in New York City, began using looping in 2 year

segments at Central Park East Elementary School (Findley, 2018; LAB 1997; Thomas, 2014). She based her reasoning on the fact that teachers and students needed time to get to know each other in order to achieve a high level of communication that would support learning. Many elementary schools in the United States use Meier's approach to looping today (Pecanic, 2003). Central Park East Elementary School used looping to build student-teacher relationships and increase academic achievement (Findley, 2018).

According to Findley (2018), looping reemerged in American Schools in the later 1980s and early 1990s. The return to implementing the practice of looping in American schools created an environment to address the academic, emotional, and social needs of students. Williams-Wright (2013) noted that schools in North America returned to looping as a way to increase student achievement.

The history of looping provides a beginning for the use of the instructional strategy in education (Findley, 2018). In addition to understanding the history of looping, a clear understanding of the benefits and disadvantages related to looping provide a framework for the decision to implement looping within educational settings.

Basics of Looping

Looping is a practice of a teacher teaching the same group of students for 2 or more years in a row (Meeks, 2008). Continuous learning, multiyear placement, and family style learning are common names for looping (Meeks, 2008; Thomas, 2014; Williams-Wright, 2013). Looping requires two or more teachers, one in each looped grade level, to have a desire, and the flexibility to leave one grade level, move up with the same group of students to the next grade level, and then return to their first grade level to begin the looping cycle over again (Grant et al., n.d.; Thomas, 2014).

The idea behind looping is to support long-term relationships between teachers and students in the classroom to prevent student anonymity (Caauwe, 2009). Looping provides benefits emotionally, socially, and academically. According to Danley (2012), much of the literature on looping indicates that stability, persistence, and intimacy are the supporting characteristics of a looped classroom. Students in a looped classroom have positive views about learning and display increased academic achievement over nonlooped students.

Advantages of Looping

When implementing looping, research found there are benefits for parents, teachers, and students (Grant et al., n.d.). Schools that have effectively implemented looping found benefits to include: improved relationships between teachers and students, more efficient instruction, better attendance rates, fewer student retentions, fewer student special education referrals, and improved student discipline. The benefits of looping for students show that they enjoy school more, have fewer discipline problems, fewer absences, have fewer referrals to special education, and are less likely to be candidates for retention (Caauwe, 2009; Lloyd, 2014).

In addition, looping does not require a long lead time, extensive planning, or much research (Grant et al., 1996). Looping can be implemented quietly, so it will not as easily become a target of groups opposed to school reform. The concept of looping is a practical approach to school reform and can be implemented without drastic changes in the school environment, without additional classrooms, and is cost effective (Williams-Wright, 2013).

Sustained Relationships

The most powerful benefit to looping is the long-term and consistent relationships among parents, students, and teachers (Nitecki, 2017). The notion of sustained relationships relates to Steiner's philosophy. Sustained relationships foster deep and lasting bonds between students and

teachers as well as teachers and families (Friedlaender et al., 2015). Looping classrooms typically provide a family-style community that is beneficial, especially for shy students, students who do not adapt well to new or changing situations, and for students that have unstable home lives (Barger, 2013; Pecanic, 2003). For some students, the teacher is the most predictable and stable person in their lives and those students can benefit from a looped classroom's stability and teacher continuity (Hitz, 2007). Brandt (1998) noted that students in looped classrooms had less anxiety about school and had greater emotional stability.

According to Ullman (2015), the development of rich relationships leads to enhanced learning. When students feel that they belong and can trust their teacher, they are more likely to come to school and be on task (Auglier, 2010). Students rely on meaningful relationships as they go through their developmental phases and short-term relationships cannot help students' meet their educational objectives (Ullman, 2015).

George et al. (1987) studied student-teacher relationships and found that 70% of teachers reported teaching the same group of students for 3 years allowed them to use more positive approaches with their students. Ninety-two percent of teachers said they knew more about their students, 69% said their students participated in class more willingly, and 85% said their students saw themselves as part of the group, felt pride in their group, and felt pride in the school as a whole. In addition, 84% of teachers reported more positive relations with parents and 75% reported increased empathy with their colleagues.

The concept or strategy of looping creates a classroom environment to support students as they progress through Maslow's Hierarchy of Needs. Looped classrooms form an environment where all members, including the teacher and students, contribute towards forming a sense of community (Bogart, 2002). The learning environment must address students' personal,

social, and emotional needs, and must engage all learners (Daggett, 2014). Much time is spent getting to know one another and appreciating various learning styles. In order to help students learn, teachers need know those students, understand how they learn and retain information, and what motivates them (Ullman, 2005). Looping allows the teacher to get to know each child and identify and address needs due to the extended amount of time spent together (Findley, 2018). In addition, looping creates an extended student to teacher, as well as student-to-student relationships. The presence of strong relationships builds trust that will positively affect learning (Daggett, 2014).

In 2009, Hattie introduced information from a Meta study (Waack, 2020). In this study, Hattie compared effect sizes of various aspects that influences learning outcomes. Effect sizes range from very positive to very negative. Any score above 0.4 has a greater effect on student achievement. Hattie placed Student Teacher Relationships at +0.72, close to the impact of almost a year and a half worth of growth each school year. People are hard-wired for long-term relationships, and emotional growth is not possible without a permanent, supportive presence (Ullman, 2005). Looping satisfies a basic need and provides educational advantages.

Parent Involvement in Looped Classrooms

Looping allows the opportunity to form closer relationships with students' parents over the years (Rasmussen, 1998; Williams-Wright, 2013). The trusting relationship built between parents and teachers allows reflection on growth and change over a longer time period and enables conversations around long-range goals for their students (Danley, 2012). Families may be more willing to accept a teacher's constructive suggestions and be more comfortable sharing challenges in talking with the teacher about their child's progress (Chirichello & Chirichello, 2001; Hitz et al., 2007). Better rapport between teachers and parents results in an increase in

parental involvement, and can therefore increase students' academic achievement (Thomas, 2014).

According to Hitz et al. (2007), parents tend to trust teachers more during the second year of a looped cycle. In addition, the teacher-parent collaborative relationship allows the parent to understand the teacher's philosophy and how it relates to their child. This partnership can lead parents to gaining a greater understanding of their child's academic and social needs (Auglier, 2010). Parents can then become more active participants in their child's education. A successful parent-teacher relationship is key to students' achievement. Looping provides an avenue by which parents and students have a sense of belonging (Danely, 2012).

Instructional Time

Another benefit to looping is that teachers gain extra teaching time (LAB, 1997; Thomas, 2014). Looping can add an extra month of teaching and learning time during the second year (Aguilar, 2010; Hanson, 1995; Weaver, 2015). Increased instructional time can lead to increased student achievement (Pecanic, 2003; Weaver, 2015). Traditionally, teachers spend the first month or so of school getting to know students, assessing what they learned the year before, teaching procedures, and conducting assessments. Looping teachers can spend less time assessing students to determine the most effective teaching strategies for each child than a single-year teacher who is teaching students for the first time (Grant et al., n.d.). Looping teachers can begin the school year with a little review of procedures. Students have already spent a full year with the teacher; therefore, they are familiar with the teacher and the routines. Time is also saved at the end of the year since students do not have to pack up to switch classrooms. Looping places students on a developmental continuum. When students and teachers stay together for more than 1 year, looping offers the gift of time (Rasmussen, 1998; Williams-Wright, 2013).

When teachers have additional time with students, it provides the time teachers need to know how each child learns, how they retain information, and what motivates them (Ullman, 2005). Understanding the individual learning style of each child provides an educational benefit, which can be especially beneficial for students who may have challenges in the classroom. Strong relationships are helpful for all students but are especially important for students with special needs (Rasmussen, 1998; Williams-Wright, 2013). Grant et al. (n.d.) found that special education referrals decreased by 55% in looped classrooms. According to Chirichello and Chirichello (2001), parents consistently found looping enabled teachers to know their child's strengths and weaknesses better and that looping allows the teacher to better meet their child's learning needs. For families whose students are English Language Learners, having the same teacher for 2 or more years helped them gain confidence (Hitz et al., 2007).

Student Attendance

According to Barger (2013), as teachers increase their understanding of each student's needs, this allows for increased academic accountability in both attendance and discipline. Students become more receptive to learning and attend school more often, due to the connection they have with their teacher. Students in looped classrooms are more engaged in the learning process and have higher attendance rates in school (Thomas, 2014).

Cistone and Shneyderman (2004) found that looping improved attendance. In this study, the average number of days absent decreased approximately 1 or 2 days and students in a looped program improved their attendance from the first to the second year. Additionally, research found that student attendance increased from 92% to 97% over a 7-year period, and teacher absences dropped from an average of 7 days per year to 3 (Grant et al., n.d.).

Student Retentions

Over the past 3 decades, grade retention polices have changed from one end of the spectrum to the other (Roderick, 1995). In the 1970s, the philosophy of social promotion was thought to be the most beneficial for students. Policies regarding social promotion came under criticism in the 1980s standards-raising movement, pushed forward by the publication of *A Nation at Risk.* This report noted the decline in student achievement test scores as evidence that policies, including social promotion, lowered the quality of standards and a decrease in the quality of America's education. In response, many schools created strict social promotion policies, often tied to scores on achievement tests. In the 1990s, another change in the outlook of social promotion occurred when school systems began to review their retention policies and search for alternative strategies. According to Oakes (2016), the onset of standardized testing and accountability placed an end to social promotion and retention as an alternative for struggling students. In addition, the push for increased accountability supports the need for evidence-based, alternative instructional strategies to increase academic achievement.

Changes to retention polices were based on evidence that found dropout rates among retained students were higher than dropout rates of promoted students (Roderick, 1995). Barro and Kolstad (1987) found that one grade retention increased the risk of dropping out by 40% to 50%. Additionally, being two grades behind increased the risk by 90%. Barro and Kolstad also found that sophomores who had repeated at least one grade dropped out at more than twice the rate of students who had not been retained. Several studies using data from school systems found that students who were retained dropped out at significantly higher rates, regardless of whether the retention happens early or later in their school careers.

McCoy and Reynolds (1999) investigated the effects of retention on school achievement. Their results indicate that the strongest predictors of retention included early school

performance, gender, parental participation, and the number of school moves. McCoy and Reynolds' findings also indicated that retention is an insufficient strategy for raising student achievement and did not appear to help students. For all achievement comparisons in the study, students that were retained consistently and significantly underperformed compared to their peers who were promoted. The authors noted that other interventions and practices, such as remediation through summer school or tutoring, are needed instead of retention.

Looping allows teachers to postpone high stakes decisions such as retention and referrals to special education (Pecanic, 2003). The advantage is that teachers in looped classrooms have two years to observe and get to know students, two years to identify and assess potential problems, and additional time to implement instructional strategies and apply interventions to resolve problems (Grant et al., 1996). This allows teachers more opportunities to meet the students' individual needs, and students have more time to catch up before they are labeled or retained (Thomas, 2014). In the meantime, teachers can try out various instructional strategies before making these decisions. For borderline students who may need extra time and attention, this may be enough. However, when students still have difficulty after a 2 year loop, grade-level retention should be considered when all other interventions and options have been tried.

Cistone and Shneyderman (2004) compared retention results and found that students in a looped classroom were more likely to advance to the next grade level compared to students in a nonlooped classroom. Additionally, Grant et al. (n.d.) found that retention rates decreased by more than 43% in those same grades.

Referrals to Special Education

According to Murphy (2002), the consistency and stability offered to students in a looped classroom are especially beneficial for students with special needs. Looping fosters the

relationships among students with special needs and those acquiring a second language (Thomas, 2014). The additional time spent with the teacher provides the time that is needed for students to grasp concepts and create products. This time can be used to create an engaging learning environment grounded in the strength of the student and teacher relationship, focused on meeting individual student needs (Oakes, 2016). In addition, the close-knit, family-like atmosphere of a looped classroom offers acceptance of students at differing ability levels.

Referral of students to special education programs is another favorable aspect of looping (Murphy, 2002). When teachers stay with their respective groups of students for more than 1 year, they have more time to analyze the child's learning needs and styles. This could result in more effective reteaching and individualized instruction due to the continuity of the teacher-student relationship. Many times, a student needs extra time and a stable and supportive environment to support learning (Grant et al., 1996). Teachers could also use alternative strategies to help students grasp concepts, resulting in higher academic achievement and more opportunities to reach grade-level standards.

Social Benefits of Looping

Several social benefits can typically be found in looped classrooms. For example, looping allows students more time to build relationships essential for learning and enhances the development of social skills (Cistone & Shneyderman, 2004). According to LAB (1997), social benefits included reduced student apprehension about a new teacher. According to Hanson (1995), time spent developing social skills and cooperative group strategies pays off during the second year. Students are better problem-solvers and are more skillful in working as a collaborative team. In addition, looping allows students to become better problem-solvers, and develops a stronger sense of community and family among parents, teachers, and students.

According to Thomas (2014), looping has social advantages for English Language learners. In a looped classroom, these students adjust well to their school and classroom. In addition, the extra time allows them to be more comfortable with their teacher and their peers. This trust enables students to develop confidence in their newly acquired language skills and have the confidence to share their skills. In some cases, these students begin to share their own culturally diverse stories from their own heritage.

Barger (2013) noted that looping provides an opportunity to teach the whole-child, meeting their academic, emotional, and social needs, which established the opportunity to increase academic achievement. The strategy of teaching the whole-child creates not only a good learner, but also a productive citizen (Findley, 2018).

Disadvantages of Looping

Educational reforms have problems, and looping has disadvantages. According to Grant et al. (1996), the problems connected to looping are few, and most can be avoided with planning.

Time

While time can be a positive aspect of looping, spending longer periods of time with the same students can also bring out the negative side of relationships (Gaustad, 1998). The greatest concern of many parents is that their child will remain with an ineffective teacher for more than one school year. According to Pecanic (2003), teacher weaknesses can be caused for a variety of reasons. The teacher could be new to the grade level, or be a new, inexperienced teacher. This could cause a loss in instructional time as the teacher tries to learn the new curriculum. A teacher may also be stressed about the added responsibility of having the same group of students for more than one year (Auglier, 2010). The teacher may not have wanted to loop. Looping requires conceptual change and some teacher may not be prepared or well suited for that type of

classroom environment (Forsten et al., 1997). It is also possible that the teacher's teaching style does not match the student's learning style (Pecanic, 2003).

Spending 2 or more years with the same students can also be difficult when there are teacher-student personality clashes, a problematic mixture of students, or unreasonable parents (Gaustad, 1998). An inappropriate match or personality conflict between a teacher and a student is a disadvantage to looping (Burke, 1997). If conflicts cannot be solved in the first year, they may become larger problems in the second year.

The relationship between teacher instructional strategies, behavior, and effects on student outcomes is known as teacher effectiveness (Heck, 2008). Sanders and Rivers (1996) used value-added methods to examine the cumulative effects of teacher quality on academic achievement. The study found sizeable differences in student learning due to variations in teacher effectiveness. In another study, Jordan et al. (1997) indicated teacher effectiveness had noticeable effects on students' math and reading scores over several years (Heck, 2008; Whitehurst, 2002). This indicated that the most dominant factor impacting student academic gain is teacher effectiveness (Sanders & Rivers, 1996).

According to Sanders and Rivers (1996), there was a presence of cumulative effects of teachers on student achievement. Groups of students with similar abilities and initial achievement levels may have very different academic outcomes based on the sequence of teachers to which they are assigned. Friedman (2018) found that students who are placed with highly effective teachers for 3 years in a row significantly outperform their peers. However, the opposite is true as well. Students with ineffective teachers may not catch up to their peers for 3 or more years. In addition, having an effective teachers will not fully compensate for the effect of an ineffective one. Even more, students with three ineffective teachers rarely catch up. Friedman

indicated that differences in student achievement of up to 50 percentile points were observed as a result of teacher sequence after only three years. Lasting effects of both effective and ineffective teachers were measurable two years later, despite the effectiveness of teachers in later grades. There is little evidence to support compensatory effects of more effective teachers in later grades.

Students benefit from regularly yearly assignments to more effective teachers (Sanders & Rivers, 1996). When this happens, students have a significant advantage in obtaining higher achievement levels. Therefore, students should not be placed with an ineffective teacher more than once. The most important component of students' development and learning is high quality and effective teaching (Lynch, 2017).

Mobility

According to Auglier (2010), the mobility of the student population may affect the success of a looping classroom. If a student population is highly mobile, they may not remain long enough to obtain the benefits of a looped class (Pecanic, 2013). According to Gaustad (1998), joining a looped classroom, especially in the second year, can be difficult for new students. Gaustad noted that adding five or more new students in the second year could be disruptive enough to reduce the benefits of looping on the original students. The new students do not have the experiences and same knowledge as the rest of the class (Auglier, 2010). Furthermore, entering a looped classroom can disrupt the cohesiveness of the class and make the new student feel left out (Thompson et al., 2009).

New students or students who move away could be negatively affected if the teacher views the curriculum as a 2-year approach (Auglier, 2010). If the teacher plans the content over the course of two years, instead of teaching each year's curriculum, students could have gaps in

their learning. Students with disabilities can also be at a disadvantage (Pecanic, 2013). Although looping provides additional time for intervention and a delay in making decisions for special education referrals or retention, a looping teacher may delay putting off the decision for too long and the student could miss out on needed help.

Relationships

One main concern for parents about looping is the relationship between the student and the teacher if the teacher is ineffective. According to Thompson et al. (2009), parents do not want their child placed with an ineffective teacher for 2 or more years. Klinzing (2019) noted that looping will not be effective, and can be detrimental, if a student is with an ineffective teacher for 2 or more years. Teachers express the same concerns over the relationships with difficult students and parents.

According to Gaustad (1998) and Thomas (2014), some students and teachers may have emotional difficulty leaving their class at the end of a looping cycle. There is a possibility of becoming too attached, which can make it difficult for the students to move on to a new classroom, and for the teacher beginning with a new group of students. Students and teachers need to make adjustments after spending 2 or more years together (Auglier, 2010). While remaining together can be beneficial for some students, it can also be a disadvantage for others. Students can become influenced by the same teacher and student strengths and weaknesses for a longer period of time and this can become a disadvantage if students begin to develop the same weaknesses (Pecanic, 2013). Familiarity with one another and problems related to this are magnified in a looped classroom.

While looping has both advantages and disadvantages, it can only be beneficial for the student and teacher if both parties are willing to participate (Meeks, 2008). Neither group will

fully benefit if this is forced. The way a teacher approaches looping is a key to its success. According to Grant et al. (n.d.), implementing looping well requires the support of administration, parents of the enrolled student, and an effective teacher.

Perceptions of Looping

Grant et al. (n.d.) indicated that parents, students, and teachers have positive experiences with looping. George and Shewey (1997) noted 70% of teachers reported looping enabled them to use more positive discipline techniques with students. The same study found that 92% of teachers said they had a more in-depth understanding of each child and 69% said they believed students participated more willingly in class. Even more than that, 84% of teachers reported that looping led to better relationships with parents. A looped school found that there were higher attendance rates of parents that attended open houses, overall parental involvement was higher, and the average daily attendance was higher, compared to a non-looped school (Grant et al., n.d.).

In a study conducted by Cistone and Shneyderman (2004), 94% of teachers and 91% of principals indicated that looping increased the time available to teachers at the beginning of the second year of the loop. 89% of principals and 71% of teachers found that this increase in time helped slower learners learn basic skills. In addition, 89% of principals and 72% of teachers stated that looping enhanced the relationship between teachers and students. Finally, 94% of principals and 95% of teachers indicated that looping increased the effectiveness of classroom instruction.

In Johnston's 2000 study, parents noted their students were more comfortable with school due to looping. This same study found that looping students in elementary school had a more positive attitude towards school. Pratt (2009) found that 100 percent of parents noted looping

was a positive experience for their child. Involvement in a looped classroom was found to be a significant predictor of positive parent perceptions of student motivation and attitude toward the school.

Nicholas and Nicholas (2002) found that parents of looping students had significantly more positive attitudes towards their child's teacher and school. In addition, parents had more positive perceptions of their children's behavior at school compared to parents of students in non-looped classrooms.

Williams-Wright (2013) conducted a mixed-methods study that investigated teachers' attitudes and perceptions and the effect of looping on academic achievement in elementary schools. Analysis of the teacher survey revealed that the majority of looped teacher perceived that looping teachers were able to improve students' academic achievement through positive long-term relationships with students and teacher-parent relationships. It was concluded that the majority of teachers had positive experiences teaching in a looped classroom.

Thomas (2014) conducted a qualitative study that described the nature of the looping cycle for elementary teachers. Teachers in the study indicated that looping was beneficial for all stakeholders and noted looping was successful and beneficial because of the relationships they were able to form with their students and families. Teachers also reported that looping was beneficial for students with special needs, English Language learners, and students living in poverty.

Student Achievement-Based Accountability

The literature presented in the sections above focused on the history, benefits, disadvantages, and perceptions related to looping. To frame the current state of educational reforms which has led schools or districts to return to strategies such as looping to improve

student achievement, the history of student achievement-based accountability is necessary (Findley, 2018).

In the 19th century, public education was supported through taxes (Sirotnik, 2004). State district school boards with elected members were legally obligated to the local community to ensure children that attended public schools were adequately housed, taught, and had needed materials. In rural district with one-room schoolhouses, which characterized most public schools until the end of the 19th century, this form of accountability was acceptable.

As the United States saw a growth in industrial economies with the rapid growth of cities, the number of schools expanded (Sirotnik, 2004). The board of education found it hard to supervise the growing number of schools, to examine teachers and students, and ensure school funds were spent appropriately. To manage accountability, boards began adopting efficiency measures of printed questions. Ove time, short-answer tests became standardized for each grade and subject and spread throughout the United States. By the end of the Civil War, most school boards had appointed a superintendent. Achievement tests helped the superintendent and school board assess what teachers had taught and what students had learned in their district. However, these results were rarely shared with the public. At the end of the 19th century and the beginning on the 20th century, standardized achievement test results were shared with the public. Public reports were a way to increase administrator and teacher efficiency.

Throughout the United States history, the focus on education by the federal government came during times of national concern or crisis (Findley, 2018). In 1958, President Dwight D. Eisenhower signed the National Defense Education Act, which led to multiple reforms that raised graduation requirements, added gifted programming, and introduced advanced placement (AP) courses in high schools (Sirotnik, 2004). Then, in 1964, President Lyndon B. Johnson

passed the Elementary and Secondary Education Act (ESEA). This provided funds for poor students to get a better education, thus improving their life chances. Senator Robert F. Kennedy attached an amendment to Title 1 of ESEA that required annual evaluations. Throughout the 1960s and 1970s, business and civic leaders encouraged legislatures to reform schools.

In 1983, *A Nation at Risk* was released (Findley, 2018; Sirotnik, 2004). This report was released by the National Commission on Excellence in Education (Park, 2004). The report noted mediocre student performance on national and international tests and coupled this performance to average economic performance in the global marketplace (Sirotnik, 2004). After *A Nation at Risk* was released, states increased high school graduation requirements, lengthened the school year, and added more testing.

In 1989, President George Bush brought all 50 governors together to discuss education (Sirotnik, 2004). They implemented six national goals, including decreasing dropout rates, adding science to the elementary curriculum, increase foreign language opportunities, and increasing national scores on the National Assessment of Educational Progress (NAEP) (Findley, 2018). Throughout the 1990s, under President Clinton and federal policy makers, states continued to mandate curricular and performance standards, implement new testing, and held administrators and teachers accountable for increasing academic achievement (Sirotnik, 2004).

In 2000, the election of President George W. Bush brought the reauthorization of ESEA as the No Child Left Behind Act (NCLB) of 2001 (Findley, 2018). This act increased test-based accountability to federal policy for schools in America (Sirotnik, 2004). NCLB also implemented sanctions for schools that failed to meet Adequate Yearly Progress (AYP) (Findley, 2018). In addition, NCLB mandated states to administer yearly assessments. These results gave new attention to student subgroups. NCLB focused on increasing the achievement of student

subgroups, including “economically disadvantaged students, students from major racial and ethnic groups, students with disabilities, and students with limited English proficiency” (NCLB, 2001).

In 2015, the Every Student Succeeds Act (ESSA) was signed into law by President Barak Obama (ESSA, n.d.). The purpose of this act was to replace and update NCLB. This law retained the annual standardized testing requirements from NCLB but moved the federal accountability aspect to the States. Each state must submit an accountability plan to the Department of Education. States can select their own goals, but they must address test proficiency, English-language proficiency, and graduation rates (Klein, 2016). Accountability goals must set an expectation that all groups that are the farthest behind close the achievement gaps. States are still required to test students in reading and math, break out the data for whole school, as well as subgroups (English-learners, students in special education, racial minorities, and those in poverty).

Although the Tenth Amendment of the United States Constitution delegates the responsibility of education to the states, this history shows that the federal government’s involvement has steadily increased over time (United States Constitution, Amendment X). Federal involvement has increased the policies and legislation for increased accountability of schools and individual student performance (Findley, 2018).

The Achievement Gap

Racial and ethnic inequality in education has a long history. In 1954, the Supreme Court ruled in Brown v. Board of Education that racial segregation of public schools was unconstitutional (Stanford CEPA, n.d.). Although substantial progress has been made in

improving the quality of education for minority students, disparities remain and progress has been slow and uneven (Ready et al., 2002; Stanford CEPA, n.d.).

The disparity that still exists include the achievement levels among minority students and Caucasian students on standardized assessments (Findley, 2018). One set of measures of racial educational equality are achievement gaps (Stanford CEPA, n.d.). In education, the achievement gap refers to the difference in academic achievement among groups of students (Ansell, 2011; Howard, 2019). The achievement gap is found in grades, standardized test scores, course section, dropout rates, and college completion rates, among other measures. Achievement gaps occur when one group of students outperforms another group and the difference in the average scores for the two groups is statistically significant (NAEP, 2020). Most often, it is used to describe the troubling performance gaps between African American and Hispanic students, compared to their non-Hispanic White peers. Minority students are more likely to score below proficiency on standardized assessments (Findley, 2018). A similar gap is also found between students from low-income families and those who are not. According to Ready et al. (2002), the achievement gap is magnified due to "demographic changes and the growing importance of education to individuals' financial security" (p. 16).

Additionally, federal legislation has increased pressure on schools and districts to improve achievement levels for all students (Findley, 2018). No Child Left Behind (NCLB), as well as the Every Child Succeeds Act (ESSA) emphasized the importance of improving achievement levels for all students, in particular for subgroups who have performed below their Caucasian peers.

Every 4 years, a sample of students across the United States are given tests in reading and math as part of the National Assessment of Educational Progress (NAEP) (Stanford CEPA, n.d.).

NAEP is designed to provide an objective assessment of the math and reading skills of students in America. NAEP results can also be used to analyze trends in White-Black and White-Hispanic achievement gaps. In general, these achievement gaps have narrowed since the 1970s in all grades in both subjects. According to Ready et al. (2002), the small change in national NAEP scores despite the rising scores of African Americans, Hispanics, and Whites, can be explained by the demographic decline of traditionally higher-scoring White test takers and the growing percentage of minorities in the national NAEP samples. In addition, the achievement gaps vary considerably among states.

NAEP results from 2017 suggested that American students of all backgrounds are still far from achieving at a level consistent with high standards for all (Harrington, 2017; Ready et al., 2002). In addition, Black and Hispanic students are far more likely than White students to score at or below basic in reading and in other subject areas. Even more, they are far less likely to demonstrate proficient and advanced skill levels.

Poor academic achievement has lasting effects past the time students are in the classroom (Harrington, 2017). Poor academic achievement can impact a student's ability to graduate from high school, go to college, or succeed in college. Students who do not progress through high school and college often have lower income and earning potential across their lifetime, fewer options for choosing their career, may become dependent on public assistance, and may have poor health.

Although there continue to be gaps in education achievement scores among subgroups, there is no reason why achievement gaps cannot be reduced and eventually eliminated (Ready et al., 2002). Research-based instructional reforms may accomplish this. Social, cultural, and economic factors affect learning, and success in achieving high standards for all must involve the

family, community, and societal changes. However, eliminating these gaps is a complex process and requires changes to happen on multiple levels with the support of different stakeholders, a variety of long-term interventions, and policy changes (Hanover Research, 2017).

Researchers have examined ways teaching can better resemble the home and community cultures of all students who have previously not had success academically (Howard, 2019; Ladson-Billings, 1995). The term *culturally appropriate pedagogy* sought to incorporate aspects of students' cultural backgrounds into the classroom environment. According to Ladson-Billings, culturally relevant pedagogical teachers encourage academic success and cultural competence, and help students recognize, understand, and critique current social inequities. In this way, educators should use a student's culture as a lens through which the student can be successful, learn about and celebrate their culture, and use their knowledge and education to solve problems and seek to decrease inequities (Findley, 2018).

Research indicated that family involvement is highly correlated with improving achievement gap outcomes (Hanover Research, 2017; Harrington, 2017). Family involvement can lead to increased student achievement, increased attendance and behavior, and improved graduation and college enrollment rates. Henderson and Mapp (2002) found that schools that successfully engaged families of diverse backgrounds focused on building trusting and collaborative relationships among families, teachers, and community members, recognized and respected families' needs as well as class and cultural differences, and embraced a philosophy of partnership.

School and classroom culture also play roles in reducing the achievement gap among minority students. Researchers found that when minority, English Language Learners (ELL), and special education students perceive their teachers as supportive, caring and responsive, and

respectful of their cultural differences, students are more likely to have higher academic achievement (Hanover Research, 2017).

To increase the achievement levels of minorities and low-income students, there must be a focus on three key areas: high standards, a challenging curriculum, and effective teachers (Haycock, 2001). Clear and public standards for what students should learn at each grade level is a key to solving the problem. They are a guide for all stakeholders as to what information and knowledge students should master. In 1991, Kentucky passed a standards-based reform by putting out a set of learning goals and stated that all students would meet those learning goals. Students have shown progress since then. For example, seven of the 20 top-performing elementary schools in reading scores were high-poverty. In math, eight of the 20 top-performing were high-poverty, and in writing, 13 of the top 20 were high-poverty.

Standards must be accompanied by a rigorous curriculum that is aligned to those standards (Haycock, 2001). Rigor should focus on the quality of teaching and learning. Research has shown that in high schools where students take more rigorous coursework, students learn more and perform better on tests. Curriculum should focus on first-order and higher-order learning outcomes (Boykin & Noguera, 2011). First-order outcomes include basic knowledge and skills, such as mastering the alphabetic code, word reading fluency, or vocabulary in literacy and basic facts and fact fluency in math. Students must also achieve higher-order learning outcomes, including knowledge-transfer skills. Students should be able to use knowledge from one area to solve problems in another area. In addition, they should be able to apply what they know, reflect on what they know, and be critical of their knowledge.

Finally, teachers must know the subjects and how to teach each subject (Haycock, 2001). However, large numbers of students, especially those who are economically disadvantaged or

who are members of minority groups, are taught by teachers without strong backgrounds in the subjects they teach. Students in high-poverty schools are more likely to be taught by teachers, in all subjects, without even a minor in the subjects they teach. The quality of a teacher makes the biggest difference in learning outcomes.

Research has been conducted and instructional strategies have been implemented to reduce the achievement gap among subgroups, however, the national achievement gap today is similar to what is was 20 years ago (Boykin & Noguera, 2011; Howard, 2019). Evidence-based instructional methods may not be enough to close the achievement gap if they cannot take place during the classroom instructional time (Konrad et al., 2011). Therefore, teachers must maximize instructional time, called "instructional efficiency" to close the achievement gap. For a teacher to be instructionally efficient, they must teach and manage the classroom in a way that yields desired outcomes without using additional time, effort, or resources. To become more instructionally efficient, teachers must consider different factors when planning, delivering, and evaluating their instruction.

In planning for instruction, it is vital that teachers are organized, set the stage for learning, and make strategic decisions about what to teach (Konrad et al., 2011). A teacher is instructionally efficient when they match their instruction with their students' learning needs. Finally, teachers should constantly evaluate what their students have learned by administering formative assessments to analyze student progress, evaluate the effectiveness of their instruction, and collect data to make decisions about upcoming instruction. Students in subgroups require instruction that is effective and efficient to help close the achievement gaps. High rates of learning can occur when efficient methods are implemented by the teacher. If students who are

behind academically increase their learning rates, they are more likely to make progress toward achieving comparable achievement levels compared to their peers.

With the nationwide focus on increasing student achievement and narrowing the achievement gap, it is imperative for educators and administrators to be aware of and implement research-based instructional strategies (Findley, 2018). Some schools and districts have implemented looping as a method of helping students meet state and national expectations (Williams-Wright, 2013).

Research Related to Academic Achievement and Looping

In a response to federal legislation and increased accountability for student achievement, some school districts and schools have implemented the strategy of looping as a way of increasing student achievement (Harrington, 2017; Williams-Wright, 2013). There has been research conducted on the achievement gains of students in looping classrooms (Findley, 2018; Murphy, 2002). This section of the literature review looks at studies examining the relationship between academic achievement and looping in different school settings, who have implemented looping to improve student outcomes.

According to Forsten et al. (1997), students in one district made significant gains on the end of year state tests. In part, the superintendent credited 2-year looping cycles with the same teacher for this gain.

Skinner (1998) analyzed student achievement in reading, language arts, and math from students in both looped and nonlooped classrooms. No statistically significant difference was found in math or reading achievement on the Missouri Mastery Achievement Test (MMAT) between students in looped and nonlooped classrooms (Snoke, 2007). A significant difference was found in the area of language arts skills, such as writing and spelling,

Hampton et al. (1998) investigated the relationship between Project FAST (Families Are Students and Teachers) and student achievement levels. Project FAST implemented looping in kindergarten through second grade, in addition to parent education opportunities to help parents support their child's education (Findley, 2018). Schools reported a significant increase on both student academic achievement and parental involvement as a result of looping. Specifically, students in looped classrooms exhibited higher reading and mathematics achievement scores on standardized tests than students in nonlooped classrooms. In addition to increased academic achievement, teachers reported an increase sense of ownership for student outcomes.

Shneyderman (2000) found advantages to the multi-year teaching assignment in their research. In this study, looping was used in 26 elementary schools. The study was conducted to compare the benefits and disadvantages of looping versus nonlooping classrooms. Students in the looped classrooms performed significantly higher on reading comprehension and mathematics assessments on the Florida Comprehensive Assessment Test (FCAT) compared to the students in the nonlooped classrooms.

In 2006, Fuller analyzed the scores of the Mississippi Curriculum Test (MCT) among seventh and eighth graders who looped compared to those that did not loop. The scores of the looped students had greater improvement than their nonlooped peers. In addition, students from the poverty group who looped from seventh to eighth grade scored significantly higher in their language scores than students from the nonpoverty group.

Snoke (2007) conducted a study comparing the achievement, retention, and special education placement of students in looping classrooms compared to students in traditional classrooms. In this study, Snoke analyzed math and reading scores on the Pennsylvania System of Schools Assessment for third, fifth, and eighth grades in looped and nonlooped classrooms.

The study concluded that there was no statistically significant difference in achievement scores of students in looped and nonlooped classrooms. The study also concluded that there was no significant increase in academic achievement in reading or math among sub-groups, including gender and socio-economic level.

Hertich (2009) conducted a study and examined results from the Standardized Test for the Assessment of Reading (STAR) Reading and STAR Math assessments from students who had looped from second to third grade (as cited in Brown, 2011). Results showed that minorities and students of low socioeconomic status who had looped outperformed their peers who did not loop on both assessments. In addition, a study conducted by Caauwe (2009) found no statistical difference in reading between looping and nonlooping students. The results from the study indicated that students in looped classrooms scored significantly in math higher than those in nonlooped classrooms.

Williams-Wright (2013) conducted a study using achievement scores from the Mississippi Curriculum Test, Second Edition (MCT2) in language arts and math. Results found statistically significant differences in looped and nonlooped students' scores in language arts and math. Students that looped scored lower than nonlooped students.

Lloyd (2014) conducted a study that compared the achievement scores of students that experienced looping compared to those that received a traditional assignment (a new teacher each year). Lloyd used results from the Measures of Academic Progress. The results of the study found that students who experienced looping did not have significant increases on academic achievement compared to peers who experienced a traditional assignment. Lloyd noted that more research is needed between groups of looped and nonlooped students, especially in diverse populations.

Washington (2015) conducted a quantitative study that compared the reading and math equivalences of second, third, and fourth grade students that participated in looped classrooms compared to students that did not. The outcomes of Measures of Academic Progress (MAP) were compared between students receiving instruction in a looped classroom and students receiving instruction in a nonlooped classroom. Results found there was a statistically significant difference in the outcome of Reading/Language Arts and Math achievement between nonlooped and looped students. The percentage of students at or above grade level was significantly higher from students in looped classrooms compared to peers in nonlooped classrooms.

In 2016, Phelps conducted a study that investigated the possible relationship between looping and nonlooping classrooms in Title 1 elementary schools in East Tennessee. Phelps analyzed STAR reading and math scores. The analysis found that the gain scores were higher for nonlooped students, but the difference between the two groups was statistically significant only for the students' gain scores in math. However, below-grade level readers in looped classrooms showed higher mean growth compared to their nonlooped peers.

Findley (2018) investigated the relationship between student assignments to a classroom implementing looping and student achievement on the End-of-Grade (EOG) in an elementary school. Findley also analyzed subgroup data to examine the relationship between the placement in a looped classroom and EOG achievement results. Findley found that students' assignment to a looped classroom did not have a statistically significant impact on student achievement. Results did indicate that looping positively impacted math achievement levels for students in the African American subgroup but did not have a statistically significant impact for other subgroups.

Klinzing (2019) found that looping can improve test scores and the effects are largest for minorities. According to Burke (1997), students who looped scored higher on their reading and

math standardized tests compared to students who did not loop. In addition, Bogart (2002) found that looping contributed to an increase in the achievement scores of third graders. This student found benefits after the first year of looping, and more evidence of higher achievement after the second year of looping. In addition, Caauwe (2009) noted that academic benefits included improved academic achievement scores, and students felt more enthusiastic in general toward learning.

The structure of a looped classroom is effective in providing additional opportunities for increased academic achievement (Pecanic, 2003). In addition to increased time on task, teachers are better able to meet individual learning needs since they have more time to observe students and analyze their learning needs and learning styles. Teachers can also begin to cover advanced curriculum (Agulier, 2010). As the first year's curriculum is mastered, teachers can move on to the second year's content, and then continue this learning in the second year by expanding on this knowledge and going more in depth in certain areas (Grant et al., 1996). Finally, teachers can build on students' prior knowledge and experience from the previous year (Pecanic, 2003).

Chapter Summary

The literature reviewed in this chapter includes theories, a historical background of looping, as well as benefits and disadvantages associated with looping. Additionally, an overview of student-based accountability and the achievement gap, as well as a review of qualitative and quantitative research previously conducted regarding the impacts is included.

Chapter 3. Methodology

The purpose of the quantitative study was to determine if there was a significant difference in the academic performance of students at the elementary level who loop compared to those who do not. This study also assessed if there was a significant difference in academic achievement among subgroups in students that loop compared to those that do not. A quantitative, ex post-facto, comparative design was used to analyze data to determine if there is a relationship between looping and academic achievement for elementary students. This chapter describes the reason the research was conducted, research design, population studied, data collection, and data analysis.

Research Questions and Null Hypotheses

The following research questions were addressed through testing corresponding null hypotheses:

RQ1: Is there a significant difference in reading scores between students participating in looping classrooms and students participating in nonlooping classrooms?

H_{01}. There is no significant difference in reading scores between students participating in looping classrooms and students participating in nonlooping classrooms.

RQ2: Is there a significant difference in math scores between students participating in looping classrooms and students participating in nonlooping classrooms?

H_{02}. There is no significant difference in math scores between students participating in looping classrooms and students participating in nonlooping classrooms.

RQ3: Is there a significant difference in writing scores between students participating in looping classrooms and students participating in nonlooping classrooms?

H_{03}. There is no significant difference in writing scores between students participating in looping classrooms and students participating in nonlooping classrooms.

RQ4: Is there a significance difference in reading scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

$Ho4_1$. There is no significant difference in reading scores between males and females participating in looping classrooms.

$Ho4_2$. There is no significant difference in reading scores between males and females participating in nonlooping classrooms.

RQ5: Is there a significance difference in math scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

$Ho5_1$. There is no significant difference in math scores between males and females participating in looping classrooms.

$Ho5_2$. There is no significant difference in math scores between males and females participating in nonlooping classrooms.

RQ6: Is there a significance difference in writing scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

$Ho6_1$. There is no significant difference in writing scores between males and females participating in looping classrooms.

$Ho6_2$. There is no significant difference in writing scores between males and females participating in nonlooping classrooms.

RQ7: Is there a significance difference in reading scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

$Ho7_2$. There is no significant difference in reading scores between minority and nonminority students participating in looping classrooms.

$Ho7_{2.}$ There is no significant difference in reading scores between minority and nonminority students participating in nonlooping classrooms.

RQ8: Is there a significant difference in math scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

$Ho8_1$. There is no significant difference in math scores between minority and nonminority students participating in looping classrooms.

$Ho8_{2.}$ There is no significant difference in math scores between minority and nonminority students participating in nonlooping classrooms.

RQ9: Is there a significant difference in writing scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

$Ho9_1$. There is no significant difference in writing scores between minority and nonminority students participating in looping classrooms.

$Ho9_2$. There is no significant difference in writing scores between minority and nonminority students participating in nonlooping classrooms.

Sample

The sample for this study consisted of students in four elementary schools in a single school district in East Tennessee. Two classrooms used looping, and two classrooms were traditional, nonlooped classrooms. The classroom in School A used looping and was of higher socioeconomic status (SES). The classroom in School B did not use looping was also of higher SES. The classroom in School C used looping and was of lower SES. The classroom in School D did not use looping and was also of lower SES.

The sample consisted of 219 students who had completed a looping cycle in 2019 -2020 at School A and School C. The sample also included all students that were in self-contained classrooms at School B and School D. Table 1 outlines the specific demographics for the sample. In a small number of cases, students opted out of the looping program after the first year, moved away, or were retained, and did not complete the 2 year looping cycle. If both years had not been spent with the same teacher for 2 consecutive years, those students were excluded from the study. A total number of 20 students did not complete a looping cycle at the research schools; therefore, the achievement scores and demographic data have been omitted from the analysis. Students who were enrolled in a traditional one-year design had to have spent both years at their respective school. Otherwise, they were excluded from the study. A total number of 28 students did not spend both years at their respective school; therefore, the achievement scores and demographic data have been omitted from the analysis. Of the 219 students in the sample, 111 had been enrolled in a looping design at their schools and remained with the same teacher for both years; 108 students had been enrolled in a single-year traditional design at the same school and had been taught by two different teachers.

Table 1

Study Population Demographics

Student Count	School A: Looping, High SES	School B: Self-contained, High SES	School C: Looping, Low SES	School D: Self-contained, Low SES
Total	67	61	44	46
Male	43	28	19	26
Female	24	33	25	20
Caucasian	61	57	35	32
African American	0	1	0	4
Asian	0	0	0	1
Hispanic	1	1	4	2
Mixed Race	5	2	5	7

Data Source

The researcher examined individual student data of students in four classrooms within the same school district in East Tennessee. Two classrooms used looping and two classrooms were traditional, nonlooped classrooms. Pertinent data included scores from the Developmental Reading Assessment (DRA), math benchmark scores, and writing assessment scores. These forms of data collection are used at the elementary level in this school district.

Data for each of these measures is kept on a district and school-wide spreadsheet. Scores for the DRA have a range from A-50. The score of an A is a prereading score, beginning in kindergarten. The scores progress as a student's reading proficiency in fluency and comprehension grows, ending with the score of a 50, typically around fifth grade. These scores are converted into numeric scores of one to four to show degrees of proficiency. These translated

scores align with how elementary teachers give grades on report cards. Scores for the writing assessments also range from one to four; one is non- proficient, or 74%, two is basic, or 84%, three is grade-level, or 92% and four is above grade-level, or 100%. Scores for the math benchmarks are based on the number of assessment questions that the student answered correctly. The final grade is the percentage correct out of 100% total.

Data Collection

After receiving approval from the researcher's dissertation committee and the East Tennessee State University Institutional Research Board (IRB), the researcher worked with the school district to obtain the data. The data used in this study were existing data from the school district. All personal identifiers were removed from the data before the researcher obtained the data to insure confidentiality for all participants. Random codes were assigned to replace student names and other identifying information. School and teacher names were not used and were given a pseudonym. The school district does not make student-level data available to the public. Access to the data is permitted by the ability of the district staff to monitor the data release and the perceived benefits. The researcher used the data request form sent by the district's Chief Academic Officer.

Data Analysis

Each of the nine research questions was addressed by the use of an independent t-test in order to make a comparison between two sets of data. The independent variables for this study were the type of classroom the student is assigned, looped or nonlooped, and student subgroups. The dependent variables for this study were the student achievement scores on the DRA (reading), writing, and math assessments. All data were analyzed using Statistical Program for Social Sciences (SPSS) and at the 0.05 level of significance.

Chapter Summary

This chapter provides the reason the research was conducted, research design, population studied, data collection, and data analysis. This quantitative, ex-post facto study used a series of independent t-test tests to determine if there are significant differences in student achievement on the DRA, math benchmarks, and writing assessments among students in looped versus nonlooped classrooms. The results are presented in Chapter 4.

Chapter 4. Findings

The purpose of the quantitative study was to determine if there was a significant difference in the academic performance of students at the elementary level who loop compared to those who do not. This study also assessed if there was a significant difference in academic achievement among subgroups in students that loop compared to those that do not. A quantitative, ex post-facto, comparative design was used to analyze data to determine if there is a relationship between looping and academic achievement for elementary students. The data used in this study were existing data. All personal identifiers were removed from the data before the researcher obtained the data to insure confidentiality for all participants.

Nine research questions were developed to guide the study. An independent t-test was used to test the null hypotheses that correspond to the nine research questions.

Research Question 1

Is there a significant difference in reading scores between students participating in looping classrooms or between students participating in nonlooping classrooms?

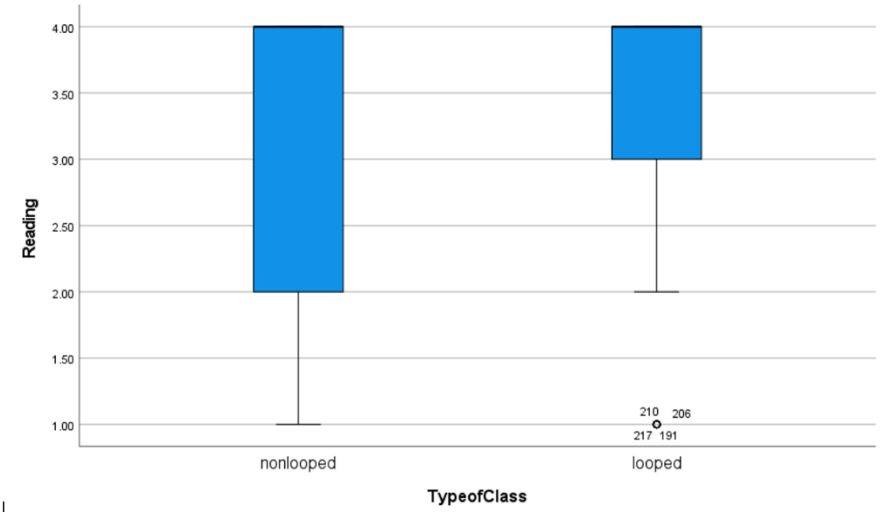
H_{01}. There is no significant difference in reading scores between students participating in looping classrooms and students participating in nonlooping classrooms.

An independent t-test was conducted to evaluate whether there is a significant difference between reading scores of students participating in looping classrooms and students participating in nonlooping classrooms. The independent variable included two levels: students who participated in looped classrooms or students who participated in nonlooped classrooms. The dependent variable was student achievement scores on the reading assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was homogeneity of variances for reading scores of looped and nonlooped students, as assessed

by Levene's Test for Equality of Variances, F(217) = .638, (p=.425). There was no statistically significant difference in the reading scores for looped students (M=3.2, SD=1.02) and nonlooped students (M=3.1, SD=1.05) conditions; *t*(216) = .538, *p*=.591. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the reading scores of looped and nonlooped students. Figure 1 shows the reading scores for looped and nonlooped students.

Figure 1

Reading Scores for Looped and Nonlooped Students



Research Question 2

Is there a significant difference in math scores between students participating in looping classrooms or between students participating in nonlooping classrooms?

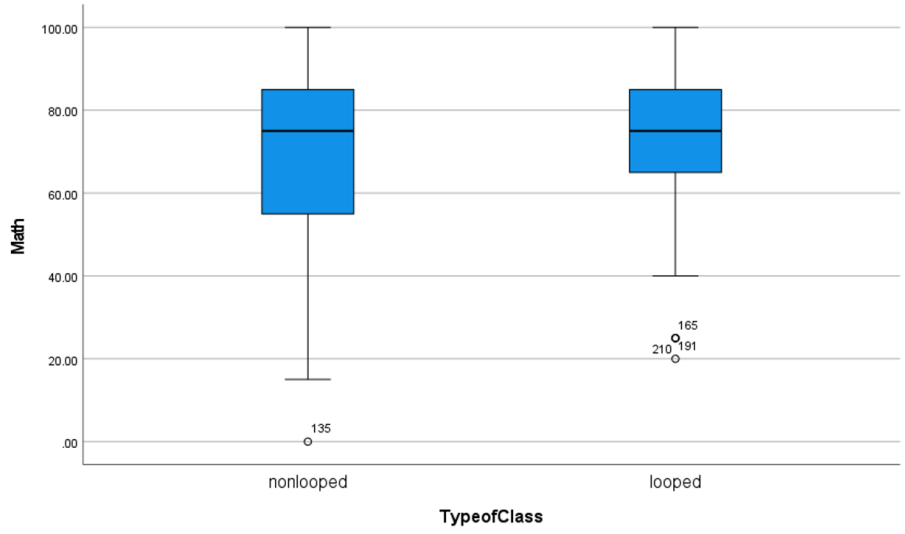
H_{02}. There is no significant difference in math scores between students participating in looping classrooms and students participating in nonlooping classrooms.

An independent t-test was conducted to evaluate whether there is a significant difference between math scores of students participating in looping classrooms and students participating in nonlooping classrooms. The independent variable included two levels: students who participated

in looped classrooms or students who participated in nonlooped classrooms. The dependent variable was student achievement scores on the math benchmark. There was not homogeneity of variances for reading scores of looped and nonlooped students, as assessed by Levene's Test for Equality of Variances F(217) = 7.027, (p=.009). There was a statistically significant difference in the math scores for looped students (M=73.4, SD=16.7) and nonlooped students (M=68.3, SD=20.9) conditions; *t*(216) = -.2.010, *p*=.04. Therefore, the null hypothesis was rejected, suggesting that a significant difference was exhibited between the math scores of looped and nonlooped students. In general, students who participated in looped classrooms scored significantly higher on the math benchmark than students who participated in nonlooped classrooms. Figure 2 shows the math benchmark scores for looped and nonlooped students.

Figure 2

Math Scores for Looped and Nonlooped Students



Research Question 3

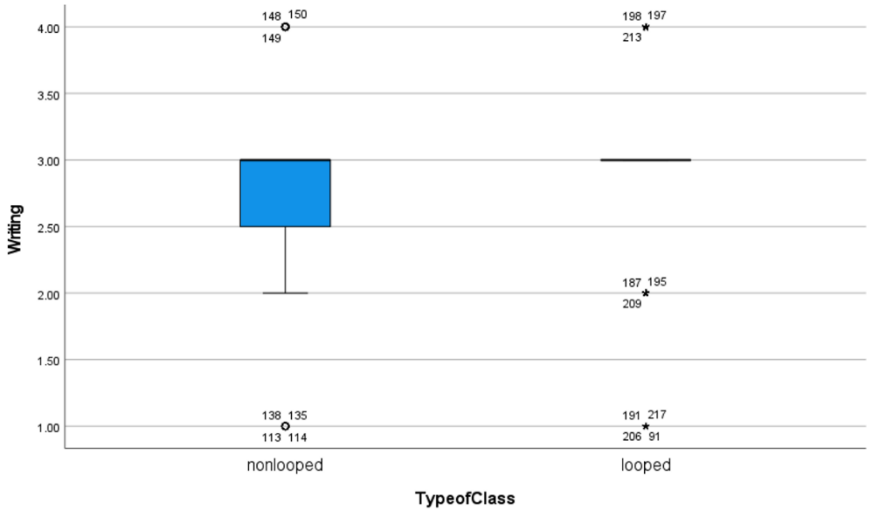
Is there a significant difference in writing scores between students participating in looping classrooms or between students participating in nonlooping classrooms?

H_{03}. There is no significant difference in writing scores between students participating in looping classrooms and students participating in nonlooping classrooms.

An independent t-test was conducted to evaluate whether there is a significant difference between writing scores of students participating in looping classrooms and students participating in nonlooping classrooms. The independent variable included two levels: students who participated in looped classrooms or students who participated in nonlooped classrooms. The dependent variable was student achievement scores on the reading assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was homogeneity of variances for writing scores of looped and nonlooped students, as assessed by Levene's Test for Equality of Variances, $F(217) = .996$, ($p=.319$). There was no statistically significant difference in the writing scores for looped students (M=2.9, SD=.78) and nonlooped students (M=2.8, SD=.81) conditions; $t(216) = 1.30$, $p=.195$. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the writing scores of looped and nonlooped students. Figure 3 shows the writing scores for looped and nonlooped students.

Figure 3

Writing Scores for Looped and Nonlooped Students



Research Question 4

Is there a significance difference in reading scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

$Ho4_1$. There is no significant difference in reading scores between males and females participating in looping classrooms.

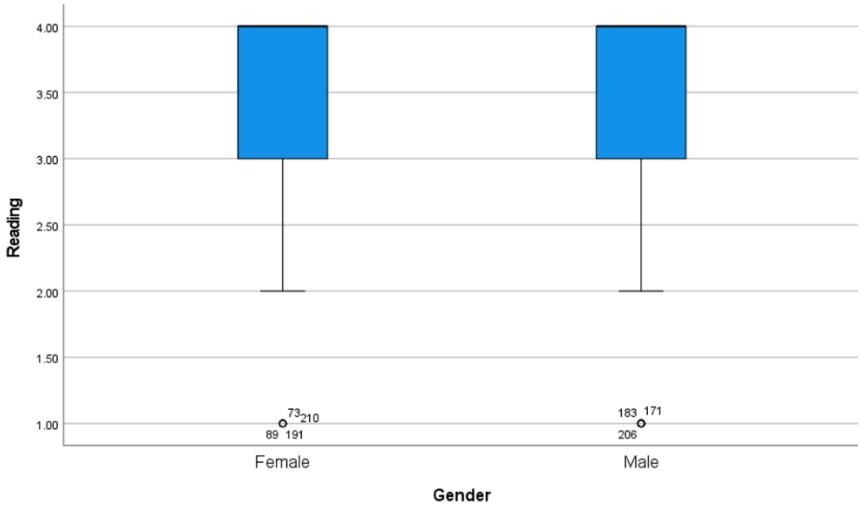
$Ho4_2$. There is no significant difference in reading scores between males and females participating in nonlooping classrooms.

An independent t-test was conducted to evaluate $Ho4_1$. The independent variable, student gender, included two levels (male, female) in looped classrooms. The dependent variable was student achievement scores on the reading assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was homogeneity of variances for reading scores of looped and nonlooped students, as assessed by Levene's Test for

Equality of Variances, F(111) = .794, (p=.375). There was no statistically significant difference in the reading scores for looped female students (M=3.2, SD=.978) and looped male students (M=3.2, SD=1.06) conditions; *t*(109) = .193, *p*=.848. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the reading scores of males and females in looped classrooms. Figure 4 shows the reading scores for males and females in looped classrooms.

Figure 4

Reading Scores for Males and Females in Looped Classrooms

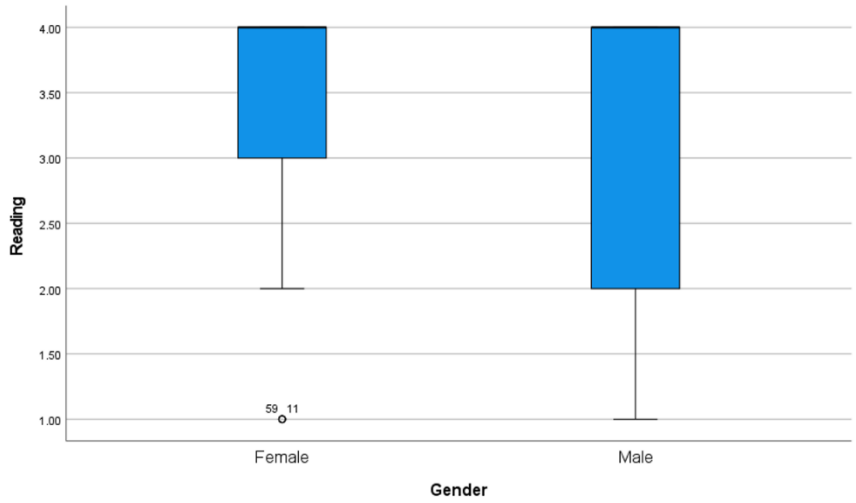


An independent t-test was conducted to evaluate $Ho4_2$. The independent variable, student gender, included two levels (male, female) in nonlooped classrooms. The dependent variable was student achievement scores on the reading assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was not homogeneity of variances for reading scores of female and male nonlooped students, as assessed by Levene's Test for Equality of Variances, F(107) = .638, (p=.048). There was no statistically significant difference in the reading scores for nonlooped female students (M=3.2, SD=.958) and nonlooped

male students (M=3.0, SD=1.13) conditions; $t(105) = .931$, $p=.354$. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the reading scores of males and females in nonlooped classrooms. Figure 5 shows the reading scores for males and females in nonlooped classrooms.

Figure 5

Reading Scores for Males and Females in Nonlooped Classrooms



Research Question 5

Is there a significance difference in math scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

$Ho5_1$. There is no significant difference in math scores between males and females participating in looping classrooms.

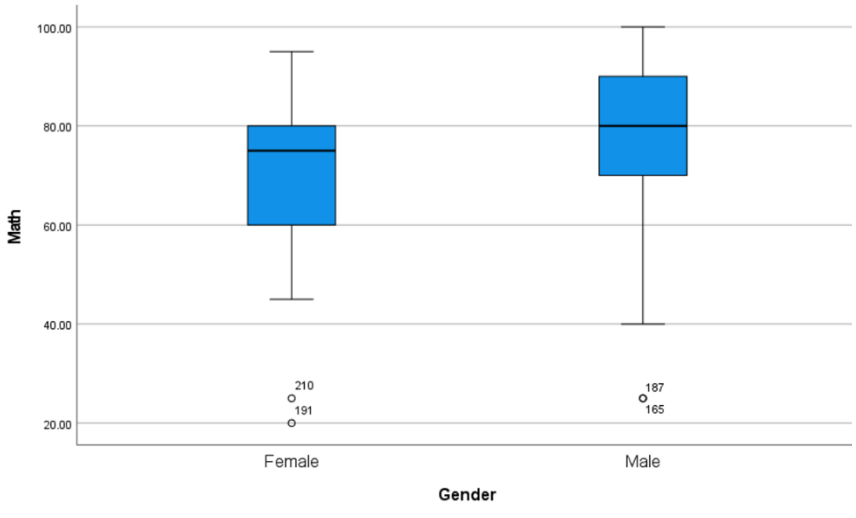
$Ho5_2$. There is no significant difference in math scores between males and females participating in nonlooping classrooms.

An independent t-test was conducted to evaluate $Ho5_1$. The independent variable, student gender, included two levels (male, female) in looped classrooms. The dependent variable was

student achievement scores on the math assessment, where numeric scores are based on the number of correct questions. There was homogeneity of variances for math scores of female and male looped students, as assessed by Levene's Test for Equality of Variances, F(111) = .001, (p=.979). There was no statistically significant difference in the math scores for looped female students (M=70.30, SD=16.46) and looped male students (M=75.96, SD=16.64) conditions; *t*(109) = 1.78, *p*=.077. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the math scores of males and females in looped classrooms.

Figure 6

Math Scores for Males and Females in Looped Classrooms

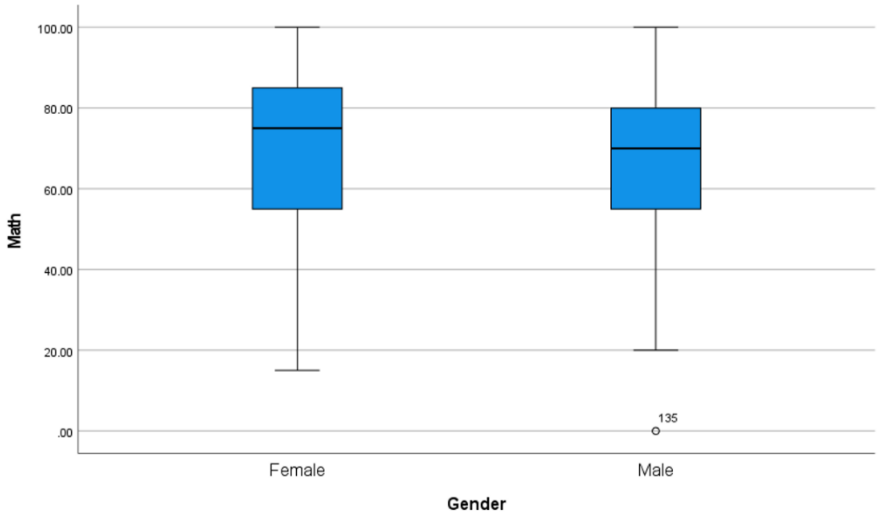


An independent t-test was conducted to evaluate Ho5$_2$. The independent variable, student gender, included two levels (male, female) in nonlooped classrooms. The dependent variable was student achievement scores on the math assessment, where numeric are based on the number of correct questions. There was homogeneity of variances for math scores of female and male nonlooped students, as assessed by Levene's Test for Equality of Variances, F(107) = .039, (p=.845). There was no statistically significant difference in the math scores for nonlooped

female students (M=70.56, SD=.20.42) and nonlooped male students (M=66.11, SD=21.40) conditions; $t(105) = 1.10$, $p=.273$. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the math scores of males and females in nonlooped classrooms. Figure 7 shows the reading scores for males and females in nonlooped classrooms.

Figure 7

Math Scores for Males and Females in Nonlooped Classrooms



Research Question 6

Is there a significance difference in writing scores between males and females participating in looping classrooms or between males and females participating in nonlooping classrooms?

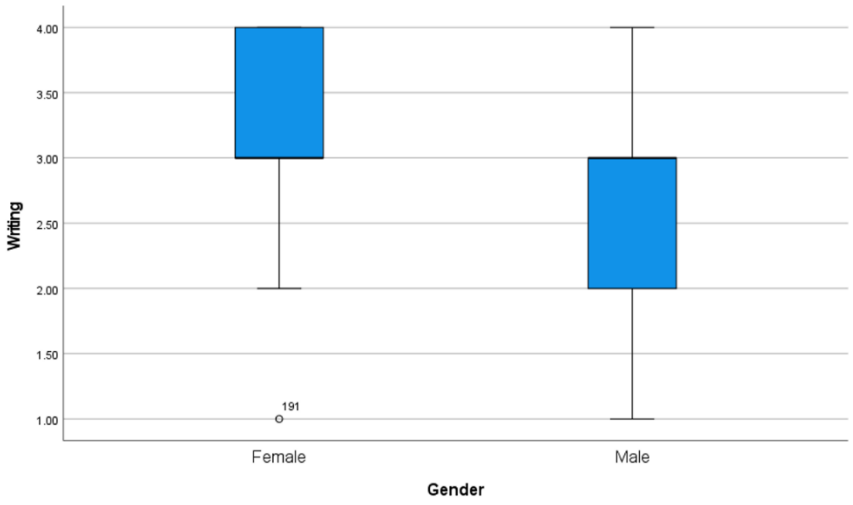
Ho6$_1$. There is no significant difference in writing scores between males and females participating in looping classrooms.

Ho6$_2$. There is no significant difference in writing scores between males and females participating in nonlooping classrooms.

An independent t-test was conducted to evaluate $Ho6_{1.}$ The independent variable, student gender, included two levels (male, female) in looped classrooms. The dependent variable was student achievement scores on the writing assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was homogeneity of variances for writing scores of female and male looped students, as assessed by Levene's Test for Equality of Variances, F(111) = 2.95, (p=.088). There was no statistically significant difference in the writing scores for looped female students (M=3.12, SD=.665) and looped male students (M=2.87, SD=.858) conditions; *t*(109) = 1.68, *p*=.094. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the writing scores of males and females in looped classrooms. Figure 8 shows the writing scores for males and females in looped classrooms.

Figure 8

Writing Scores for Males and Females in Looped Classrooms

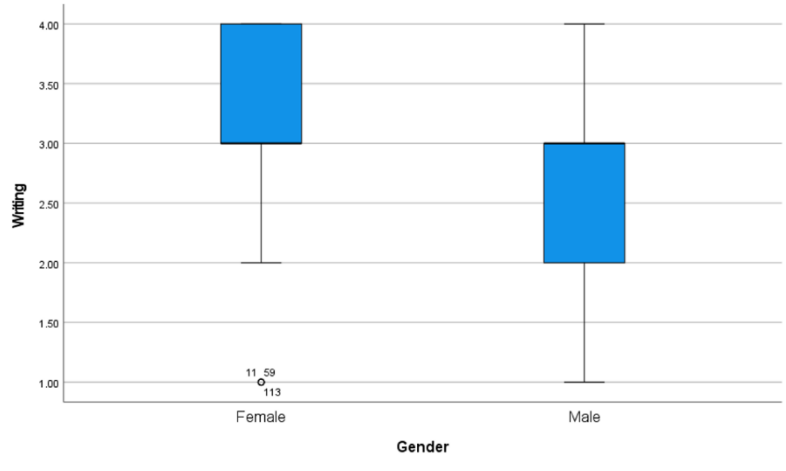


An independent t-test was conducted to evaluate $Ho6_{2.}$ The independent variable, student gender, included two levels (male, female) in nonlooped classrooms. The dependent variable was

student achievement scores on the writing assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was homogeneity of variances for writing scores of female and male nonlooped students, as assessed by Levene's Test for Equality of Variances, F(107) = .2.03, (p=.157). There was a statistically significant difference in the writing scores for nonlooped female students (M=3.03, SD=.783) and nonlooped male students (M=2.64, SD=.804) conditions; *t*(105) = 2.53, *p*=.013. Therefore, the null hypothesis was rejected, suggesting that a significant difference was exhibited between the writing scores of males and females in nonlooped classrooms. In general, females who participated in nonlooped classrooms scored significantly higher on the writing assessment than males who participated in nonlooped classrooms. Figure 9 shows the writing scores for males and females in nonlooped classrooms.

Figure 9

Writing Scores for Males and Females in Nonlooped Classrooms



Research Question 7

Is there a significance difference in reading scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

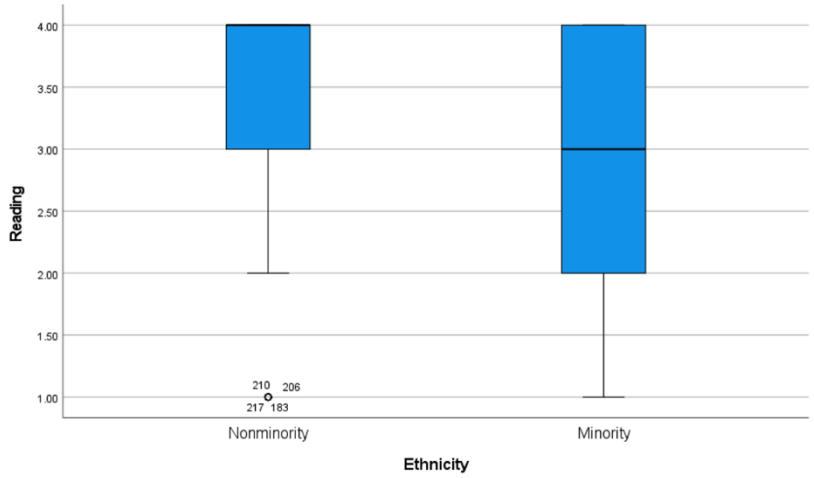
$Ho7_1$. There is no significant difference in reading scores between minority and nonminority students participating in looping classrooms.

$Ho7_2$. There is no significant difference in reading scores between minority and nonminority students participating in nonlooping classrooms.

An independent t-test was conducted to evaluate $Ho7_1$. The independent variable, student ethnicity, included two levels (minority, non-minority) in looped classrooms. The dependent variable was student achievement scores on the reading assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was homogeneity of variances for reading scores of looped students, as assessed by Levene's Test for Equality of Variances, F(111) = .656, (p=.420). There was no statistically significant difference in the reading scores for looped minority students (M=2.86, SD=1.12) and looped nonminority students (M=3.28, SD=1.00) conditions; $t(109) = 1.46$, $p=.146$. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the reading scores of minorities and nonminorities in looped classrooms. Figure 10 shows the reading scores for minority and nonminority students in looped classrooms.

Figure 10

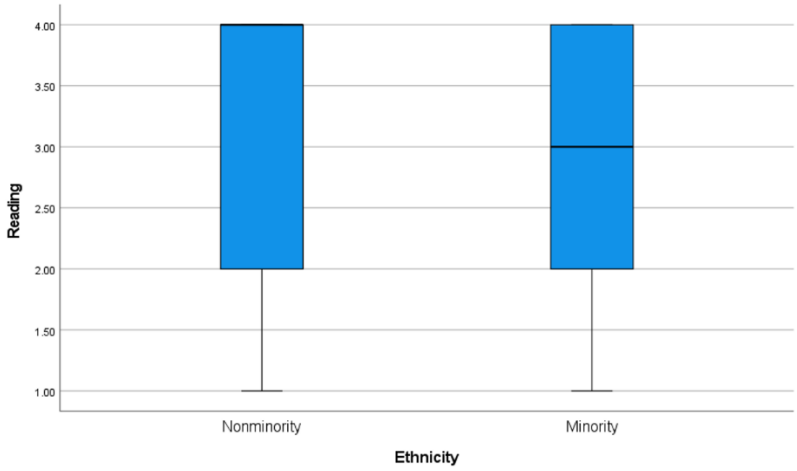
Reading Scores for Minorities and Nonminority Students in Looped Classrooms



An independent t-test was conducted to evaluate Ho7$_2$. The independent variable, student ethnicity, included two levels (minority, nonminority) in nonlooped classrooms. The dependent variable was student achievement scores on the reading assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was homogeneity of variances for reading scores of minority and nonminority nonlooped students, as assessed by Levene's Test for Equality of Variances, F(107) = 1.00, (p=.318). There was not a statistically significant difference in the reading scores for nonlooped minority students (M=2.88, SD=1.18) and nonlooped nonminority students (M=3.20, SD=1.02) conditions; *t*(105) = 1.15, *p*=.252. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the reading scores of minority and nonminority students in nonlooped classrooms. Figure 11 shows the reading scores for minority and nonminority students in nonlooped classrooms.

Figure 11

Reading Scores for Minority and Nonminority Students in Nonlooped Classrooms



Research Question 8

Is there a significant difference in math scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

Ho8$_1$. There is no significant difference in math scores between minority and nonminority students participating in looping classrooms.

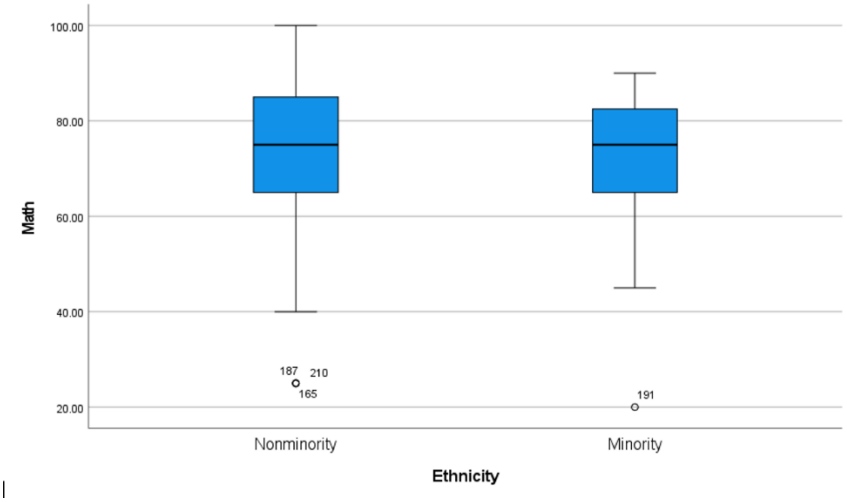
Ho8$_2$. There is no significant difference in math scores between minority and nonminority students participating in nonlooping classrooms.

An independent t-test was conducted to evaluate Ho8$_1$. The independent variable, student ethnicity, included two levels (minority, non-minority) in looped classrooms. The dependent variable was student achievement scores on the math assessment, where numeric are based on the number of correct questions. There was homogeneity of variances for math scores of minority and nonminority looped students, as assessed by Levene's Test for Equality of

Variances, F(111) = .366, (p=.547). There was no statistically significant difference in the math scores for looped minority students (M=70.66, SD=19.35) and looped nonminority students (M=73.90, SD=16.35) conditions; *t*(109) = .696, *p*=.488. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the math scores of minorities and nonminorities in looped classrooms. Figure 12 shows the math scores for minority and nonminority students in looped classrooms.

Figure 11

Math Scores for Minorities and Nonminority Students in Looped Classrooms

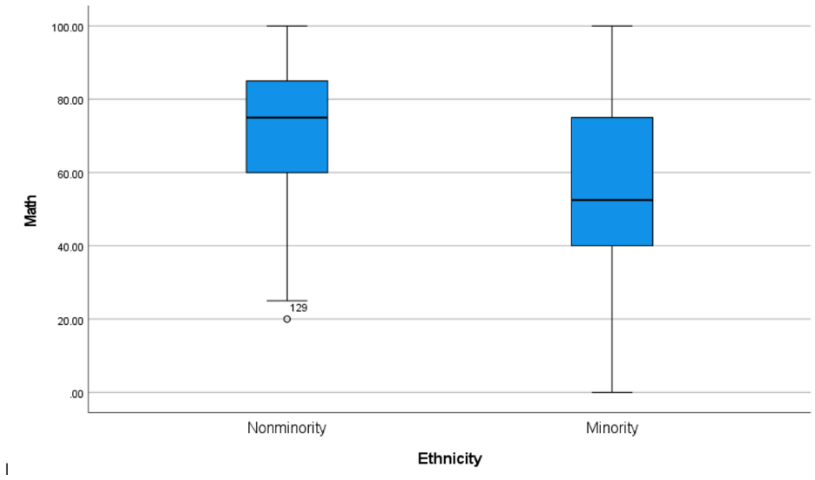


An independent t-test was conducted to evaluate Ho8$_2$. The independent variable, student ethnicity, included two levels (minority, nonminority) in nonlooped classrooms. The dependent variable was student achievement scores on the math assessment, where numeric are based on the number of correct questions. There was not homogeneity of variances for math scores of minority and nonminority nonlooped students, as assessed by Levene's Test for Equality of Variances, F(107) = 5.29, (p=.023). There was a statistically significant difference in the math scores for nonlooped minority students (M=53.33, SD=26.89) and nonlooped nonminority

students (M=71.34, SD=18.25) conditions; $t(105) = 3.50$, $p=.001$. Therefore, the null hypothesis was rejected, suggesting that a significant difference was exhibited between the math scores of minority and nonminority students in nonlooped classrooms. In general, nonminority students who participated in nonlooped classrooms scored significantly higher on the math assessment than minority students who participated in nonlooped classrooms. Figure 13 shows the math scores for minority and nonminority students in nonlooped classrooms.

Figure 12

Math Scores for Minority and Nonminority Students in Nonlooped Classrooms



Research Question 9

Is there a significant difference in writing scores between minority and nonminority students participating in looping classrooms or between minority and nonminority students participating in nonlooping classrooms?

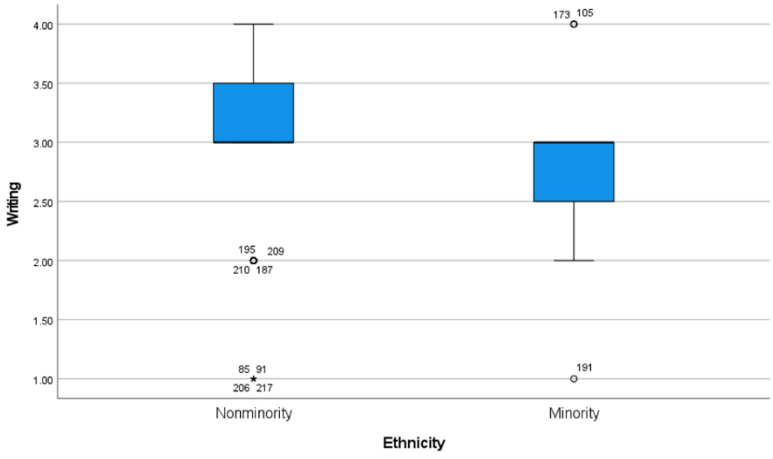
Ho9_1. There is no significant difference in writing scores between minority and nonminority students participating in looping classrooms.

$Ho9_2$. There is no significant difference in writing scores between minority and nonminority students participating in nonlooping classrooms.

An independent t-test was conducted to evaluate $Ho9_1$. The independent variable, student ethnicity, included two levels (minority, non-minority) in looped classrooms. The dependent variable was student achievement scores on the writing assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was homogeneity of variances for writing scores of looped students, as assessed by Levene's Test for Equality of Variances, F(111) = .336, (p=.563). There was no statistically significant difference in the writing scores for looped minority students (M=2.86, SD=.833) and looped nonminority students (M=3.00, SD=.781) conditions; *t*(109) = .609, *p*=.544. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the writing scores of minorities and nonminorities in looped classrooms. Figure 14 shows the writing scores for minority and nonminority students in looped classrooms.

Figure 13

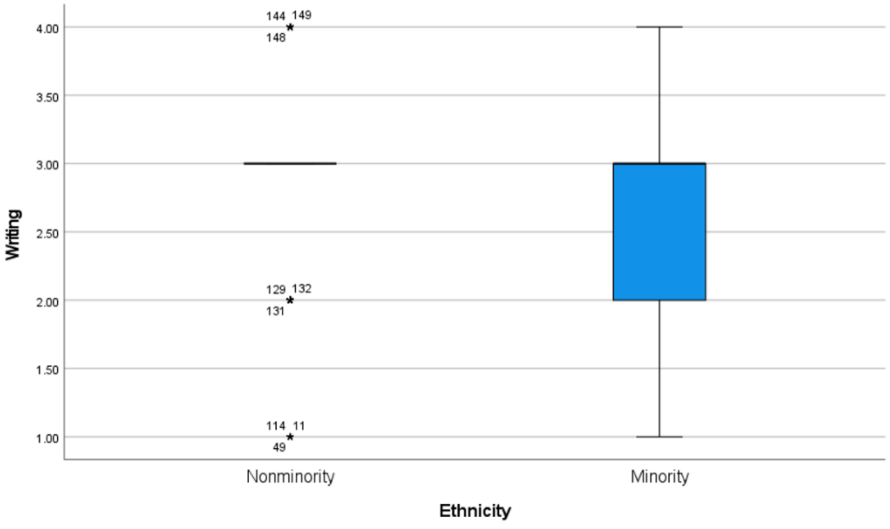
Writing Scores for Minorities and Nonminority Students in Looped Classrooms



An independent t-test was conducted to evaluate $Ho9_{2.}$ The independent variable, student ethnicity, included two levels (minority, nonminority) in nonlooped classrooms. The dependent variable was student achievement scores on the writing assessment, where numeric scores of one to four show degrees of proficiency: 1=74%, 2=84%, 3=92%, and 4=100%. There was not homogeneity of variances for writing scores of minority and nonminority nonlooped students, as assessed by Levene's Test for Equality of Variances, F(107) = 6.72, (p=.011). There was not a statistically significant difference in the writing scores for nonlooped minority students (M=2.66, SD=1.08) and nonlooped nonminority students (M=2.87, SD=.751) conditions; *t*(105) = .997, *p*=.321. Therefore, the null hypothesis was retained, suggesting that little difference was exhibited between the writing scores of minority and nonminority students in nonlooped classrooms. Figure 15 shows the writing scores for minority and nonminority students in nonlooped classrooms.

Figure 14

Writing Scores for Minority and Nonminority Students in Nonlooped Classrooms



Chapter Summary

Chapter 4 presents the analysis of data contained from the school district. The data included students in four classrooms within the same school district in East Tennessee. Two classrooms used looping and two classrooms were traditional, nonlooped classrooms. Pertinent data included scores from the Developmental Reading Assessment (DRA), math benchmark scores, and writing assessment scores. These forms of data collection are used at the elementary level in this school district. The researcher observed that overall, students who participated in looped classrooms scored higher on the math benchmark than students who participated in nonlooped classrooms. However, there was no significant difference in reading or writing benchmark scores between students who participate in looped classrooms compared to students who participated in nonlooped classrooms.

The researcher also observed that there was a significant difference in writing scores between males and females in nonlooped classrooms, with females scoring higher than males. However, there was no significant difference in writing scores between males and females in looped classrooms. In addition, no significant difference was found between males and females in looped and nonlooped classrooms in either reading or math scores.

Finally, the researcher observed that there was a significant difference in math scores between minority and nonminority students in nonlooped classrooms, with nonminority students scoring higher than minority students. However, there was no significant difference in math scores between minority and nonminority students in looped classrooms. In addition, no significant difference was found between minority and nonminority students in looped and nonlooped classrooms in either reading or writing scores.

Chapter 5. Discussion, Conclusions, and Recommendations

This chapter contains a summary of the findings, conclusions, and recommendation for future research. There has been an emphasis on increasing student achievement scores since policies and/or studies developed by both Federal and State governments were released, such as *A Nation at Risk* (1983), and *No Child Left Behind* (2001) (Findley, 2018). However, many students do not meet the basic standards in core subjects. Additionally, there is a continued achievement gap between White, Hispanic, and Black populations (Danley, 2012). In an effort to narrow the achievement gap for all students, one instructional strategy, known as looping, has been implemented by educators, which may help school districts meet these challenges issued by the Federal and State governments (Findley, 2018; Minkel, 2015; Phelps, 2016). Thus, this study served to determine if there was a significant difference in the academic performance of students at the elementary level who loop compared to those who do not. This study also assessed if there was a significant difference in academic achievement among subgroups in students who loop compared to those who do not.

Discussion and Conclusions

Research Questions 1, 2, and 3 focused on the academic achievement scores in reading, writing, and math between looped and nonlooped students. The researcher found that students who participated in looped classrooms scored higher on the math benchmark than students who participated in nonlooped classrooms. This finding supports previous studies that found that students in looped classrooms exhibited higher math achievement scores than those in nonlooped classrooms (Burke, 1997; Caauwe, 2009; Hampton et al., 1998; Washington, 2015). However, there was no significant difference in reading or writing benchmark scores between students who participated in looped classrooms compared to students who participated in nonlooped

classrooms. This supports Skinner (1998), Snoke (2007) and Lloyd (2014), who found no significant difference in reading scores from students in both looped and nonlooped classrooms. However, this finding conflicts with Shneyderman (2000) and Washington (2015), who found students in looped classrooms scored significantly higher on reading assessments compared to nonlooped students.

Research Questions 4, 5, and 6 focused on academic achievement scores in reading, writing, and math among subgroups, including gender, between looped and nonlooped students. The researcher found that there was a significant difference in writing scores between males and females in nonlooped classrooms, with females scoring higher than males. However, there was no significant difference in writing scores between males and females in looped classrooms. This could suggest looping is a beneficial strategy, as students' scores stayed consistent between year 1 and 2 for looped students in all subject areas. However, there was a significant difference in the writing scores of males and females when they did not participate in looped classrooms, with males scoring lower than females. Additionally, no significant difference was found between males and females in looped and nonlooped classrooms in either reading or math scores.

Research Questions 7, 8, and 9 focused on academic achievement scores in reading, writing, and math among subgroups, including minorities, between looped and nonlooped students. The researcher found that there was a significant difference in math scores between minority and nonminority students in nonlooped classrooms, with nonminority students scoring higher than minority students. However, there was no significant difference in math scores between minority and nonminority students in looped classrooms. In addition, no significant difference was found between minority and nonminority students in looped and nonlooped classrooms in either reading or writing scores.

There was no statistically significant difference in math scores between minority and nonminority students in looped classrooms. This could suggest that looping is an effective strategy for minority students, as their scores stayed in line with nonminority students compared to minority students in nonlooped classrooms, who scored lower than nonminority students. This would support Hertich (2009), who found that minorities who loop outperform their peers who do not loop on reading and math assessments. The achievement gap for minority students continues to be a persistent problem and despite efforts, little progress has been made. Therefore, any strategy which indicates the ability to impact the achievement gap which is persistent for minority students deserves the attention and consideration by school districts and educational leaders (Boykin & Noguera, 2011).

The results from this study indicated a significant difference in math scores in two areas, including between looped and nonlooped students, and between minority and nonminority students in nonlooped classrooms, with minority students scoring lower than nonminority students. The math benchmark is based on the number of assessment questions that the student answered correctly. The final grade is the percentage correct out of 100% total. This is different from the DRA and writing assessment, which are given and scored by the teacher. This could lead to teacher influence in reading and writing scores, since it is not based on percentage correct. This was a factor that could not be ruled out in the study.

Implications for Practice

In order for students to be productive citizens, they must develop competency in reading, writing, and math (Danley, 2012). The quantitative data analysis revealed there are some positive outcomes when implementing looping. This study indicated a significant difference in academic achievement levels for looped students compared to nonlooped students, as measured by the

math benchmark. The mixed findings of this study are consistent with the previous research related to the benefits and challenges of looping (Fuller, 2006; Hampton et al., 1998; Hertich, 2009; Lloyd, 2014; Skinner, 1998; Snoke, 2007; Washington, 2015). The following implications for practice emerged as a result of the current study:

1. Districts and educational leaders should consider implementing specific strategies which shows the ability to increase the academic achievement among students.
2. Since looping is a complicated process with mixed outcomes, school districts and leaders should be thorough in their research and decision to implement looping (Findley, 2018). School districts should fully explore the benefits and challenges related to looping and the individual school environment in which they intend to implement looping.
3. School districts and leaders should focus on a comprehensive approach to raising the achievement gap for students within subgroups, including incorporating aspects of students' cultural background into the classroom environments, engaging families of diverse backgrounds, and focusing on building relationships (Hanover Research, 2017; Ladson-Billings, 1995;). These, along with a focus on high standards, a challenging curriculum, and effective teachers, can support students in closing the achievement gap (Haycock, 2001). Strategies, such as looping, which focus on relationships and family involvement, can work together to begin to narrow this gap.
4. Leaders should be aware of the qualities of an effective teacher and keep these in mind when deciding which students to place with a teacher for more than one school year.

Recommendations for Future Research

Based on the results of this study and the literature reviewed for this study, further research is needed to provide additional information on the benefits of looping, especially among subgroups. This study was not intended to determine the causation of the relationship, only that they do exist. The recommendations for future research include the following:

1. A qualitative study should be conducted in order to further examine the motivational and intrinsic needs for students involved in looping programs. These variables may be of interest for the selection of students that participate in the looping cycle.
2. Conduct follow up research using the same cohort of students to evaluate academic achievement on standardized assessments, such as TN Ready or TCAP.
3. Conduct a longitudinal study using the same cohort of students to evaluate academic achievement in further grades, including into middle and high school.
4. Conduct a quantitative study on subgroups, including economically disadvantaged students, retained, academically gifted, and special education, to assess if looping makes a significant difference in the academic achievement levels.
5. Conduct a quantitative study to investigate attendance rates of students and teachers, student retentions, and referrals to special education between looped and nonlooped students.
6. Examine the academic achievement levels of students in other settings, such as rural or urban, or with a larger population of students assigned to classrooms practicing looping and nonlooping to determine the significance of the school setting on student achievement.
7. Conduct research on the characteristics of teacher effectiveness for looped classrooms to explore the impact on student success. This study could examine the quality of teacher

and the chosen teaching styles or methods implemented by the teacher to see if there are effects on learning within a looped classroom. Including measures of teacher effectiveness would allow for the researcher to determine if it was the quality of the teacher that impacted learning rather than looping or nonlooping.

Chapter Summary

Chapter 5 includes an overview of the related literature, a statement of the problem that the research was analyzing, discussion and conclusions of the study, implications for practice, and recommendations for further research. The researcher found that overall, students who looped scored significantly higher on the math benchmark compared to nonlooped students. In addition, females scored higher on the writing assessment in nonlooped classrooms, and nonminority students scored higher on the writing assessment compared to minority students in nonlooped classrooms.

Several implications for practice were derived from this study including consideration by leaders to implement strategies that are effective for increased academic achievement for students. Additionally, leaders should be aware of the benefits and challenges associated with looping before implementing it into schools.

While the results of this study support much previous research, several recommendations for additional research were presented. Further investigation is needed into student characteristics that contribute to success in the looping cycle. In addition, further research is needed to determine if the quality of the instructor in looped classrooms is related to increased academic achievement, and several longitudinal quantitative studies could be implemented to assess achievement on standardized tests or academic achievement in later grades.

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