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Looping: the Impact of a Multi-Year Program on the Academic Progress, Retention, and Special Education Placements of Students in Two South Central Pennsylvania Schools

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LOOPING: THE IMPACT OF A MULTI-YEAR PROGRAM ON THE ACADEMIC PROGRESS, RETENTION, AND SPECIAL EDUCATION PLACEMENTS OF STUDENTS IN TWO SOUTH CENTRAL PENNSYLVANIA SCHOOLS

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Abstract

The purpose of this study is to determine if there are increased benefits in a looping instructional delivery system, as it pertains to academic progress, retention rates, and special education placements. Specifically, the study determined if there was a significant difference between students involved in a looping instructional model as compared to those not participating in a looping model. The target population of this study consisted of students looping and non-looping in third, fifth, and eighth grades, who attended rural elementary schools located in central Pennsylvania. The students would have attended the districts between the years of 1999-2005. PSSA scaled scores in Math and Reading were analyzed for the fifth and eighth grade years. Gender, socio-economic background, retention rates, and special education placements were analyzed as factors, which may have been affected by the looping program. One hundred twenty students were selected from both looping and non-looping programs for participation in the study. Academic progress (math and reading) of students, who participated in looping or non-looping instructional model, was measured through a causal-comparative regression analysis. . Results of this study have indicated that there is no statistical significant academic difference between students who participated in either a looping or non-looping educational design.

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DEDICATION

This study is dedicated to my wife Sharon and daughter Amanda for their love, support and understanding throughout this process.

A Growing Child

"A parent plants the seed…

A good teacher enriches the soil…

And only the child can decide when they

are ready to grow!"

(Unknown)

CHAPTER I

INTRODUCTION

With the advent of a stronger governmental influence in education, through acts like No Child Left Behind (NCLB), teachers and administrators have struggled to meet goals established for students and schools with the current educational designs. Therefore, educators have been continuously looking for better ways to achieve academic effectiveness. The National Commission on Excellance in Education established the report *Nation At Risk*, which stated that American businesses were being taken over by foreign interests due to the failure of public education (DuFour & Eaker, Comymius & O'Neil, 2002, p. xvii). Ineffective teaching was cited as the cause of this deterioration of American Industry. Stigler and Hiebert (1999), in their book, The Teaching Gap rebutted this determination by stating "school learning will not improve markedly unless we give teachers the opportunity and the support they need to advance their craft by increasing the effectiveness of the methods they use" (Stigler & Hiebert, 1999, p. ix).

Today, educators are left with the goal of establishing an educational design or finding an educational design which enables students to learn and perform more effectively and efficiently. Schelb, an elementary teacher at Hillcrest Elementary School in East Moline, Illinois, has approached this problem by looking at current school designs, specifically questioning: "Why uproot kids year after year and expect them to relearn a new set of rules each year" (Schelb, as cited in Heartland AEA, 1998, p. 11; Checkley, 1995). To support her belief it has been found that interpersonal relationships with other children and significant adults, such as parents and teachers, are crucial for a

child's learning and development. Subsequently, when a relationship between the school and family develops, a sense of community is created increasing the connection between school and family (Checkley, 1995). Milburn (1981) studied two elementary schools in similar areas. One school's educational design was the traditional single-year progression and the other used a multi-year design (looping), where the students stayed with the same teacher more than one year. The results of the study found that, "students in the extended relationship school out performed their counterparts in the traditional school on basic skills tests" (Burke, 1997, p. 3).

Daniel Burke, superintendent of the Illinois' Antioch School District reported that teachers and students in a multi-year (looping) educational design "form a strong social unit that translates into a true community of learns" (Black, 2000, p. 41). In his ERIC digest article (2000), Burke wrote, "social learning is education itself." Social learning between students in a multi-year design combined with the development of long-term relationships help teachers deal with Average Yearly Progress (AYP) goals. It is the multi-year design, which helps teachers better develop educational plans for each students.

Educators such as Montessori (1907), Steiner (1919), and Sizer (1999) have studied child growth and development and the needs of children to increase the foundations of education. Montessori and Steiner found in their studies an underlying emerging theme: students who stayed with the same teacher benefited from that relationship, strengthening their ability to learn. From this finding, the concept of having students and teachers staying together for more than one traditional school year developed.

The first use of this concept by educators was found in the one-room schoolhouse. "In 1919, there were 190,000 one-room schools scattered all around the American countryside. Now there are fewer than 400 left." (Ellis, 2005, p. 1). The strategy of students and teachers staying together for multiple years was referred to as teacher rotation in a 1913 Department of Education memorandum.

Teacher rotation was used to define how teachers would move with their students to the next grade level (Grant et al., 1996). A memorandum further "encouraged city schools to foster deeper and longer-lasting teacher-student relationships"(Black, 2000, p. 41). The concept of looping was initiated in the United States through the Department of Education's memorandum on "teacher rotation," by stating the following:

> Shall teachers in city-graded schools be advanced from grade to grade with their pupils through a series of two, three, four, or more years, so that they may come to know the children they teach and be able to build the work of the latter years on that of the earlier years… What the child needs is not an ever-changing personality, but a guide along the pathway of knowledge to the high road of life (Grant, Johnson, & Richardson, 1996, p. 17).

Historical Background

In the early 1900s, Rudolf Steiner, an Austrian educator began the "Waldorf School" (LAB, 1997). Waldorf schools began when the owner of the Waldorf-Astoria cigarette factory invited Steiner to speak to his workers. Steiner developed a plan to incorporate adult education and an apprentice program to help the workers learn new skills. His plan included pairing an experienced worker (acting as a teacher or mentor) with a new worker (acting as a student or mentee). The owner of the factory was so impressed with this plan that he asked Steiner to create a curriculum to educate the children of the factory. Thus, the Waldorf Schools were created.

The essential element to Steiner's school plan was the development of the student's relationship with the teacher. He was not concerned with the actual development of instructional materials, but it was Steiner's belief that "a long-term relationship with the teacher was beneficial to children" (LAB, 1997, p. 4). To foster this belief, Steiner had students and teachers remain together during their elementary instruction, which consisted of the first eight years of education. The first Waldorf School (Freie Waldorfschule) opened in Stuttgart, Germany in the year 1919 (Barnes, 1980; Uhrmacher, 1993). In 1928, the first Waldorf School was established in the United States and it was located in New York City (Carroll, 2005).

In addition to Steiner's belief (as referenced above), Steiner also found that children pass through three phases of development. In the first stage, Steiner observed that children learn through imitation. Therefore, the academic content during this stage of development should be held to a minimum. In the second stage, Steiner found that children learn best "by acceptance and emulation of authority." (Carroll, 2002, p. 13). When children are placed with the same teacher during this second stage, school becomes a "family." In the third stage, Steiner believes that "the astral body is drawn into the physical body, causing puberty." (Carroll, 2002, p. 3).

For instance, "In Waldorf educational settings, one teacher and the same group of students remain together from grade one through grade eight" (Burke, 1997, p. 2). Teachers have a larger role to play in a Waldorf School than those in a traditional single-year educational design. Teachers must see more than just a single year picture of a student's academic and overall development. In a single-year design, a teacher saw only "a set of snapshots of student performance" (Newberg, 1995, p. 714). Moreover, in the

multi-year design, as in the Waldorf School, a teacher staying with the same students for several years allows them to participate "in the feature-length film of the students' lives as learners" (Newberg, 1995, p. 714).

The Benefits of Looping

The benefits of extended relationships as described by Montessori and Steiner have suggested that in a multi-year design, teachers by developing long-term relationships would be to able see their students throughout the educational progression (Newburg, 1995), develop a sense of community within their classrooms (Checkley, 1995), and develop an increased knowledge of how students are taught (Sroufe, 1996).

Long-term relationships occur when "children have the opportunity to develop friendships with other children, to establish a trusting relationship with the teacher or teachers, and become familiar with the expectations of the classroom" (Novick, 1996, p. 44). James Comer, Director of Yale University's School Development Program, stated: "No significant learning occurs without a significant relationship" (Grant, Richardson, & Forsten, 2000). Significant relationships, synonymous to long-term relationships, are built over an extended period of time.

According to Ford (1997), long-term relationships allow teachers to know and understand the students within the educational community. Furthermore, these long-term classroom relationships have been shown to increase instructional time at the beginning of the second year (Ratzki, 1988). Time spent learning rules and familiarizing with the classroom does not take as long because students are already familiar with the rules. The expectations of the teacher are some of the reasons why instructional time has increased when long-term classroom relationships have been established.

A student's ability to trust is increased by a safe intellectual and emotional climate (Zahorich & Dichanz, 1994). Therefore, students who are placed in an environment in which they feel safe are more willing to take risks and become more involved in the educational process. Additionally, long-term relationships enable teachers to become more knowledgeable of their student's strengths and weaknesses which will increase the teacher's ability to improve instruction (Gonder, 1997; George, 1987). "Spending several years with a class enables teachers to accumulate more in-depth knowledge of students' personalities, learning styles, strengths, and weaknesses. This longer contact reduces time spent on diagnosis and facilitates more effective instruction" (Gaustad, 1998).

Empirical Basis for Looping Support

Ford (1997), Gonder (1997), George (1987), Grant, Richardson, & Forsten, (2000), articulated that educational disciplines have benefited from the strategy of developing long-term relationships found in multi-year or looping programs.

Ford reported on a study by May A. Mycock in 1966. In this study, she "compared the effects of vertical and horizontal grouping in the British infant school." (Ford, 1997, p. 153). Four schools were compared; two used vertical groupings and the other two used horizontal grouping. She found significant differences in students' social interactions and the effects of a lengthened teacher-child relationship in a multi-year class (Ford, 1997),

Gonder (1997) explains how special education students benefited from long-term relationships through success stories.

George (1987) conducted a descriptive study at Lincoln Middle School in Gainesville, Florida during the 1984-1985 school year. The study was comprised of observations, surveys, and interviews with parents, teachers, and students. During Lincoln Middle School's program : Student-Teacher Progression (STP), participants' attitudes, after staying together for over a year, positively increased the longer they were together. George found that the "long-term relationships caused teachers to be more dedicated and spend more time on their teaching. It enhanced positive relationships with parents, enabled teachers to be better able to diagnose student needs, and encouraged the use of innovative teaching strategies" (George, 1987, p. 70). George (1987), also found these long-term relationships highlighted classroom management and a sense of community. Specifically, "classroom management [has] improved because the teachers came to know their students better due to the increase of time" (George, 1987, p. 69). A sense of community developed as the relationships, level of trust, and security increased.

In another study completed by George and Lounsbury (2000), teachers and students both agreed that discipline within the classroom improved because of the sense of community that developed over a two-year period. This study involved seventh and eighth grade students at Tolland Middle School. This comparative analysis found that along with "strong support of the parents, a reduction in behavioral infractions, and evidences of the other purported benefits, academic gains were achieved" (George & Lounsbury, 2000, p. 71).

Additionally, Rappa (1993), and Steiny (1997), have found there have been fewer discipline problems reported in the Attleboro, Massachusetts school district where students are required to loop from grades one through grade eight. The study reported

"student attendance increased from 92% average daily attendance to 97.2% average daily attendance. Retention rates were decreased by 43%. Discipline declined significantly and special education referrals were decreased by over 55%." (Rappa, 1993).

According to Grant et al. (1996), looping is a program, which allows students and teachers to progress to the next grade level together. "Looping is about the people working daily in that classroom. Essentially, this practice promotes strong, extended, meaningful, positive interpersonal relationships between teachers and students that foster higher student motivation and stimulate an improved learning environment for students" (Burke, 2000, p. 3).

Statement of the Problem

More than two decades ago, the National Commission on Excellence in Education's (1983) *A Nation at Risk* addressed the need for excellence in education. The document painted a bleak picture of America's public schools. "Our society and its educational institutions seem to have lost sight of the basic purposes of schooling and of the high expectations and disciplined effort needed to attain them" (National Commission on Excellence in Education, 1983, p. 22).

In 1986, *A Nation Prepared: Teachers for the 21st Century*, the Carnegie Foundation reported that without changes in the teaching profession, school reform would not happen (Carnegie Forum, 1986). School districts responded to the report by experimenting with school organization and curriculum changes.

The current issues that have developed regarding the multi-year program include: Are multi-year programs such as looping beneficial? Do multi-year programs meet the needs of students, parents, teachers and administrators? Factors skewing the

statistics from achievement scores include: student movement in and out of the district and situations where teachers are reassigned due to a fluctuation in population.

In order to meet educational needs of communities, programs have to be constantly studied. This study will look at the academic progress and performance of students in "looping," as compared with students in the regular single year progression in an attempt to determine if multi-year programs have any educational benefits. The study will focus on academic scores of both male and female students in multi-year programs versus regular single year programs. It will also look at math and reading scores of students in multi-year programs versus single year programs. The results of the study will help administrators determine whether a multi-year educational design, similar to looping, help students in their districts improve their academic scores on various standardized testing provided by the state government.

Hypotheses

According to the LAB at Brown (1997), there is little quantitative research in regards to the academic benefits of a multi-year educational program such as looping (LAB, 1997). This study will determine the academic progress of participants in the A and B school districts over a six-year period. Participants were involved in either a looping or non-looping educational program. In both programs, parents had a choice regarding whether their children participated in either educational program. Hypotheses will be studied and analyzed using regression analysis. Students' scaled scores in reading and math on the Stanford Achievement Test Ninth Edition (SAT 9), TerraNova Standard Achievement test, and the Pennsylvania System of School Assessment (PSSA)

standardized tests will be evaluated to determine if participation in the looping program in two South Central Pennsylvania Elementary Schools were academically beneficial.

The hypotheses are:

H_1: There will be a statistically significant increase in reading scaled scores of male students involved in looping as compared with the reading scaled scores of non-looping male students at the $p \leq .05$ level of significance.

H_2: There will be a statistically significant increase in reading scaled scores of female students involved in looping as compared with the reading scaled scores of non-looping female students at the $p \leq .05$ level of significance.

H_3: There will be a statistically significant increase in math scaled scores of male students involved in looping as compared with the math scaled scores of non-looping male students at the $p \leq .05$ level of significance.

H_4: There will be a statistically significant increase in math scaled scores of female students involved in looping as compared with the math scaled scores of non-looping female students at the $p \leq .05$ level of significance.

H_5: There will be a statistically significant increase in math scaled scores of socio-economic disadvantaged students involved in looping as compared with the math scaled scores of non-looping socio-economic disadvantaged students at the $p \leq .05$ level of significance.

H_6: There will be a statistically significant increase in reading scaled scores of socio-economic disadvantaged students involved in looping as compared with the reading scaled scores of non-looping socio-economic disadvantaged students at the $p \leq .05$ level of significance.

H_7: There will be a statistically significant increase in academic progress of those students involved in looping as compared with non-looping students as compared by the PSSA completed in grade 5 and 8 at the $p \leq .05$ level of significance.

H_8: There will be a statistically significant reduction of retention rates of those students involved in looping as compared with non-looping students measured by retention rate data at the $p \leq .05$ level of significance.

H_9: There will be a statistically significant decrease in the number of special education placements of those students involved in looping as compared to non-looping students measured by special education placements at the $p \leq .05$ level of significance.

The null hypotheses are:

H_{01}: There will be no statistically significant increase in reading scaled scores of male students involved in looping as compared with the reading scaled scores of non-looping male students at the $p \leq .05$ level of significance.

H_{02}: There will be no statistically significant increase in reading scaled scores of female students involved in looping as compared with the reading scaled scores of non-looping female students at the $p \leq .05$ level of significance.

H_{03}: There will be no statistically significant increase in math scaled scores of male students involved in looping as compared with the math scaled scores of non-looping male students at the $p \leq .05$ level of significance.

H_{04}: There will be no statistically significant increase in math scaled scores of female students involved in looping as compared with the math scaled scores of non-looping female students at the $p \leq .05$ level of significance.

H_{05}: There will be no statistically significant increase in math scaled scores of socio-economic disadvantaged students involved in looping as compared with the math scaled scores of non-looping socio-economic disadvantaged students at the $p \leq .05$ level of significance.

H_{06}: There will be no statistically significant increase in reading scaled scores of socio-economic disadvantaged students involved in looping as compared with the reading scaled scores of non-looping socio-economic disadvantaged students at the $p \leq .05$ level of significance.

H_{07}: There will be no statistically significant increase in academic progress of those students involved in looping as compared with non-looping students as compared by the PSSA completed in grade 5 and 8 at the $p \leq .05$ level of significance.

H_{08}: There will be no statistically significant reduction of retention rates of those students involved in looping as compared with non-looping students measured by retention rate data at the $p \leq .05$ level of significance.

H_{09}: There will be no statistically significant decrease in the number of special education placements of those students involved in looping as compared to non-looping students measured by special education placements at the $p \leq .05$ level of significance.

Significance of Problem

"Rooted in developmental learning theories, looping is not part of a particular school movement, but can be practiced differently in different communities to reflect local school visions and to help achieve individual school goals" (Denault, 1999). "Experts estimate thousands of U.S. educators, are currently in the loop" (NEA Today,

1998, p. 1). NEA continues to state that these educators "in the loop" are staying with the same students for more than one year. These above-mentioned educators are deciding to loop from one grade level to the next grade level with the same students. Since looping has been an expanding educational design, studying the possible benefits for teachers, parents, and students would be an effective tool for school administrators when making decisions regarding looping for their school districts.

"What looping advocates often don't mention, however, is… that while looping has been successfully implemented in many schools, there is no body of research supporting greater cognitive or affective growth in children who have experienced it" (Vann, 1997, p. 41). This study will use archived student data from two rural South Central Pennsylvania schools to determine possible benefits of the looping educational design.

Every year students are expected to progress at specified levels that are determined by local school boards, states, and the federal government. With the establishment of the No Child Left Behind Act (2001), schools and school staff members are experiencing an increased responsibility for their students to meet the government-defined levels of progress. This Act makes school districts accountable not only to governmental agencies, but to the members of the public in their communities. In most instances, the news media will publish scores and other compliance data from government sources to show how the schools are making progress and rated in their communities. Society has now come to expect that schools to fulfill their responsibility to teach children to competent and productive members of society. To aid schools in the

process, Federal, States, and local educational agencies are developing standards in order to meet the requirements of NCLB.

School districts are implementing district educational standards aligning federal and state standards. No Child Left Behind Act (2001), has dictated that school districts must create standards which will have all students attaining proficiency in Reading and Mathematics by the year 2014 (U.S. Department of Education, 2003). In Pennsylvania, the Commonwealth has adopted an "accountability system, which will include every public school and local educational agency (LEA), with a goal of 100% of all students, schools, and LEAs reaching proficiency by 2013-2014" (U.S. Department of Education, 2003, p. 8).

The State Board of Education (1999), established standards governing academics and assessments. The NCLB (2001), requirements will enhance the state standards finalized in 1999. Those standards were developed to sets of standards, which would facilitate student achievement providing schools, parents, and the community a way of determining student performance (U.S. Department of Education, 2003, p. 8).

Schools not meeting AYP for two consecutive years, will be put on a "school improvement cycle; after two more years of not meeting AYP, the school district will be put into a corrective action cycle" (U.S. Department of Education, 2003, p. 18). School assistance includes planning, support teams, distinguished educators, intermediate services, and funds to help support educational communities (U.S. Department of Education, 2003).

The researcher of this study will be looking at retention rates, special education placements, and academic progress in looping programs as compared with the single-year

standard progression to help determine if a looping design is beneficial for students, educators, parents, and school communities.

Results from this study will add to the limited body of research on looping educational designs. The results will better inform educators of the benefits a looping program provides teachers, parents, and students in comparison to a standard year progression program.

Independent Variables

Looping, which is commonly referred to as one of multi-year educational designs, has been identified by other names throughout the literature including "'continuous learning,' 'continuous progress,' 'persisting groups,' 'Multi-year grouping,' 'teacher/student progression,' or a number of other terms" (LAB, 1997; Gaustad, 1998; Jacobson, 1997). The term "looping," is credited to Jim Grant, Director of the Society of Developmental Education in Peterborough, New Hampshire (Lincoln, 2000). According to Grant (1996), teachers move from one grade level to the next, and then returns to the original level completing an educational loop. Looping is a stable, long-term relationship between student and teacher, parent and teacher, and student and student. The long-term relationship "creates the healthy emotional attachments that are critical to learning" (Jackson & Davis, 2000, p. 134). When a teacher and students are together for an extended time, the relationships have a positive effect on student outcomes (Gonder, 1994). The ability to build stronger relationships is one of the reasons which helped Looping gain its popularity (Jacobson, 1997). The independent variable used in this study for comparison, will be the Looping and Non-looping programs used in two Central Pennsylvania schools.

Dependent Variables

Dependent variables in the study will include academic progress (math and reading), special education placements, retention rates, gender, and socio-economic status. The independent variable of looping in this study is studied against the dependent variables to see what impact looping has on the dependent variables. The research will help determine if a multi-year program design has a positive impact on the dependent variables.

Research Questions

A literature search for information will be conducted to help identify both positive and negative factors of multi-year programs. Variables will compare the traditional single year program and the multi-year program to determine the benefits of both programs. The benefits of examining the two programs may enable future school officials to make more informed decisions regarding the implementation of each program in their school systems.

The first research question evaluates the significance of the independent variable as related to dependent variables.

1. How does a multi-year instructional design affect and address student needs?

Diversity among school districts across Pennsylvania such as student population, financial state, demographics, and staffing dictate the type of educational programs offered to meet the needs of the community. The second research question addresses

these differences, eliciting information, which will help districts, choose the appropriate educational programs.

2. What effects do the two educational designs have on school districts and subsequently, the delivery of their educational program?

Finally, with the increased public awareness and push for accountability of education due to reports such as the No Child Left Behind Act (2001), which dictates that all students will be proficient in Mathematics and Reading by the year 2014, educators face the difficulty of making sure that every child meets the requirements in the NCLB Act.

Adequate Yearly Progress (AYP) is the yearly attainment levels which must be met in schools under NCLB. Schools that do not meet academic and attendance goals are listed on improvement lists. Each school district must meet the specific levels (AYP) each year including up to one hundred percent attainment of all students in reading and mathematics by the year 2014. Schools not meeting the expected levels for two consecutive years are put on improvement lists in order to attain the expected AYP levels (NCLB Compliance Insider, 2005). Schools must attain levels in a prescribed progression in order to meet the 2014 goal (USDE, 2003). The third research question addresses this aspect of the research.

3. What components of the looping educational programs can be used to improve the academic success of all students?

Operational Definitions

The following definitions are terms operationally defined for this study.

Academic Progress – Positive growth students exhibit in math and reading from one year to the next year (Liu, 1997, George & Alexander, 1993).

Developmentally Appropriate – Treating children as individuals, knowing how they develop and learn, and matching that knowledge with content and activities (Kostelink, 1993).

Developmentally Appropriate Practices – DAP, are age appropriate teaching techniques, which produce maximum learning (Grant, 1996).

Educational Institutions – Schools where students attend to learn specific curriculum.

High Stakes Decisions – The decisions teachers and parents make at the end of a traditional one-year educational program, to determine if a student should be retained for another year in the same grade (Grant, 1996).

Learning Support – An educational program for students with an I.E.P. (Individual Educational Plan) (PDE, 2005).

Looping – Looping is a term used to describe a student in an educational program where students and teachers stay together for more than one year. A two-year cycle where the teacher and students begin in one grade and continue together to the next year. The teacher would then "loop" back to teach another group (Grant, Johnson, & Richardson, 1996).

Multi-year Education – Students stay with the same teacher for more than one year (Hanson, 1995).

PSSA – Pennsylvania System of School Assessment state achievement test, which measures reading and mathematics (PDE, 2005).

Retention Rates – This refers to the number of students who have been retained in the same grade.

Scale Score – "The score from which norm-referenced, criterion-referenced, and Performance Level scores are derived" (CTB/McGraw-Hill, 2001).

Socio-economic disadvantaged status – Students who qualify for free or reduced lunch as per the government's standards.

Stanford Achievement Test Ninth Edition – Standardized achievement test, "which measures student's school achievement in reading, language arts, mathematics, science, and social science. The Ninth Edition reflects the national curriculum and educational trends of the end of the twentieth century" (Stanford Achievement Test: Directions for Administering, 1996, p. 7).

Limitations

Parents select whether their children participate in a looping or non-looping instructional model in both districts. The decision may indicate levels of parent involvement, which may have an affect on student learning because of the rate of parent volunteering, parent/teacher relationships, and more supportive parents. Non-looping students are with a teacher for one school year, while looping students' stay with the same teacher for a period of two school years. Students, who have participated in the looping program, are there because of their parents' choice and not due to random placement.

The number of students which move from the district to another district or school district attendance area reduce the number of participants in the study. The research

results will be limited because it is expected that a percentage of students will no longer be in the district's population. Communicating with the respondents is important in order to get a good response. The educational climate, how the community feels about looping, may have changed during the years of the programs existence. Curriculums and textbooks change, which causes teachers who loop, to learn additional information. Teachers who loop must learn two years of information (Grant, 1996). Increases or decreases in student populations determine how many classrooms are needed, teacher movement from grade to grade, building to building, which may not have a looping program contribute to the educational environment just as the attitudes of parents, teachers and administrators.

Researchers state that a gain of almost a month of instruction is provided in the looping design (Hanson, 1995; Mazzuchi & Brooks, 1992). Increase in instructional time may give students in multi-year programs an advantage. Students enrolled in a multi-year program have the advantage of teachers knowing their strengths and weaknesses. This knowledge provides more opportunity for teachers "to tailor the curriculum to individual student needs" (Checkley, 1995). Extra instruction along with an "emotionally supportive environment" help students learn (Gaustad, 2003). Looping provides a longer time frame, which encourages developmental practices and pushes teachers to try creative teaching methods (Gaustad, 2003). Therefore, teachers should be able to increase the amount of instructional time as compared to teachers meeting students for the first time when they enter their classroom.

Summary

The challenges faced in education today are compounded by the implementation of new policies and programs by the government; which includes for example, NCLB (2001), a program that is aimed at improving the educational system. However, as school administrators have found, schools need to look at what is best for each student that is impacted by an educational program, not just test scores. In order to attain AYP, schools need to find ways to help educate all the students in their charge in the most effective manner. Finding ways to educate all students in the most effective manner is today's dilemma. Societies' expectations are built on the educational standards developed by local, state, and federal agencies. These expectations force schools to make decisions primarily on the results of test scores, instead of looking at the complete educational program of services for each student. Therefore, by analyzing schools using both standard year and multi-year programs to educate students, recommendations can be made for future educators faced with similar educational challenges. Schools need to be able to determine which type of program will be beneficial for their school district.

As a guide to the reader of the study, the following is a brief outline of the chapters of this study:

Chapter I: Introduction to the Study

Chapter II: Review of Literature Relating to School Structures

Chapter III: Design of the Study

Chapter IV: Analysis of Data

Chapter V: Summary of Study

CHAPTER II

LITERATURE REVIEW

Introduction

The purpose of this chapter is to review literature pertaining to the academic progress and performance of students in a long-term relationship within a looping educational design in comparison to students in a regular single year progression. The themes of the literature used for this review involve the Multi-year/Looping Design and Multi-year Education. The goal of the study is to determine whether a multi-year educational design, similar to looping, help students improve their academic scores on various standardized testing provided by the state government.

Educational designs are adapted to the educational needs of each community. Educators should adapt the educational design according to the communities' vision and needs. The looping educational design can be adapted to accommodate the needs of the individual school building, or the entire system (Grant, 1996). Some systems use the two-year design, while others choose a three-year design. Decisions are made by each system as to the educational needs of each community.

Extended learning time increases the academic development of students in the looping program (George, 1996; Jubert, 1996; Liu, 1997; Chirichello, 2001). Joseph Rappa, Chief Educational Administrator of the Attleboro School District in Massachusetts, turned his district to a multi-year program over a three-year period. Teachers reported that an extra month of instruction was gained at the beginning of the second year due to students knowing the routines and class rules. (Hanson, 1995).

According to Rothstein (2001), learning styles, developmental learning theories, teacher/student progression, time on task, retention rates, special educational placements, and school culture can be used to influence academic achievement. Walberg (1994) reports that research has consistently stated that groups have an emotional effect on the members. In particular, the nuclear family unit is responsible for the attitudes of children pertaining to school. Schools have had student-learning groups, which work cooperatively on projects and large group instruction. In the field of work, managers may have similar grouping situations. Production teams working together to reach a common goal is a direct result of the kind of cooperation observed in persistent groups (Walberg, 1994).

Educators have used cooperative learning groups as a way to increase learning, and help students realize the need for teamwork in their futures. Unfortunately, the traditional 181day school term cuts short the effectiveness of the group. In a multi-year, situation, students, parents, and the teacher are able to extend this time of educational activity through the extra year (Liu, 1997). A community of learners may develop between students, parents, and teachers due to the extra time gained in a multi-year design. Researchers have recommended that the bonds developed in a community of learners help create an atmosphere for learning (Boyer, 1995; Sergiovanni, 1994). Home/School Relationships, Teacher/Student progression, persistent groups, cooperative learning will be used to study the effects of multi-year on students in looping designs at both School District A and School District B.

According to Shonkoff and Phillips (2000), an important piece of information dealing with learning and appropriate environment has been “reflected in a number of

dramatic transformations that characterize the social and economic circumstances under which American families are raising young children" (Shonkoff & Phillips, 2000, p. 3). Shonkoff and Phillips stated there is a need for "high-quality programs that promote sustained relationships between young children and qualified personnel" (Shonkoff & Phillips, 2000, p. 5). These programs, referenced by Shonkoff and Phillips, should address the developmental needs of children and guarantee a safe, stimulating environment. (Shonkoff & Phillips, 2000).

Research on school effectiveness has consistently suggested that long-term teacher/student relationships improve student performance (George, 1987). The learning process can be positively affected through looping. This is due to the fact that looping builds on the concept of long-term relationships creating a consistent learning pattern over a two-year period (Denault, 1999). These relationships form bonds between the teacher and students. The literature on grouping practice makes recommendations for schools to become a community of learners, with adults and students creating bonds for the purpose of learning (Boyer, 1991). According to Boyer (1991), family networks have been disappearing due to family mobility. "In America, the family is so often portrayed as carrying on in splendid isolation." (Boyer, 1991, p. 9). Family networks supported daily life by visits from family members, doctors, and neighbors, which comprised a supportive community (Boyer, 1991). Boyer (1991) noted grouping practices in schools have developed classrooms into a community of learners with adults and students creating bonds for the purpose of learning. Regular classrooms of public schools have been resistant of moving from the traditional single year to a multi-year/looping design, except in special area such as music, art, physical education, and learning support

classrooms (Lincoln, 2000). Although the literature on looping and multi-year education points to successes based on looping, America has not embraced this concept (Burke, 1996).

The study will assess the areas of academic progress, retention rates, and special education placements in multi-year and standard year programs. By comparing these factors in the two programs, schools will be able to look at the results and make appropriate educational decisions for their specific school or district which meet the needs of both students and district.

Multi-year/Looping Educational Design

Looping is a term coined by Jim Grant (1996), Director of the Society of Developmental Education to represent an educational design, which teachers move from one grade to another for two or more years with their students. This educational design has been identified by other names throughout the literature including " 'continuous learning,' 'continuous progress,' 'persisting groups,' 'Multi-year grouping,' 'teacher/student progression,' or a number of other terms" (LAB, 1997).

Characteristics of a looping educational design were first found in the most basic form of education, the one-room schoolhouse. In the one-room schoolhouse sat students of all ages and abilities.

During the Industrial Revolution, population shifted toward the urban areas of the United States (Forsten, Grant, & Richardson, 1999). Horace Mann, Secretary of the Massachusetts Board of Education, became aware of the population shift and felt increased pressure to replace the costly private schools with a common school. He felt that a common school would be the "great equalizer" (Cremin, 1957). Mann's primary

goal would be "social harmony" (Cremin, 1957). His vision was of a common school "in which the children of all classes and representing all levels of society would be educated together and would thus acquire the mutual respect essential to the function of a democracy" (Glenn, 1987, p. 292). The result was a school system, which separated students by specific age levels. Mann's educational model has been the dominant educational structure in the United States since its inception during the late 1840's (Forsten et al., 1999).

Society needed more trained individuals for the workforce due to more untrained workers coming into the industrial world of work (Serafini, 2002). More money and time had to be spent training the workers. Businesses needed to find ways to help train future employees. Frederick Taylor, the father of the scientific management movement, searched for ways to make business more efficient. Leaders of society urged school systems to find ways for which they could be held accountable. Taylor designed a top down management theory, which became the main concept used by businesses to increase workplace efficiency. His model became the organizational management system used by schools (Hoy & Miskel, 1991).

Leaders of society (business and governmental) are asking for accountability from the educational system in return for their investment. If workers come to them untrained, they have to spend time and resources to bring them up to speed (Serafini, 2002). The "Factory Model" of education, as described by Serafini (2002), is a way leaders can control the system and maintain accountability. States are using large scale testing to measure success, in order to help find ways to comply with the "No Child Left Behind" legislature of 2001 (No Child Left Behind Act, 2001). Pennsylvania's PSSA has

expanded to include third grade testing. Specific levels have to be met each year with a national goal of 100% proficient in 2014 (NCLB Act, 2001). The "Factory Model" of instruction used in the 1900's, depicted a modernist concept of the American educational system (Serafini, 2002). Serafini believed a switch from teaching isolated bits of information and testing to see how well students have mastered the information needs to move to a more Reflective–Inquiry structure.

Rudolph Steiner (1919), Dr. Maria Montessori (1907), and Theodore Sizer (1999) developed reforms in educational designs by encouraging long-term relationships. These models enhanced the relationships that were present in the one-room schoolhouse design by lengthening and strengthening relationships. The use of long-term relationships between student and teacher to educate the learner is known as the reflective inquiry method (Johnson, 1997).

Reflective Inquiry is a social activity involving human beings, interpretive process and the social construction of knowledge (Johnson, 1997). In a reflective inquiry structure, there are three main goals, which include: helping students learn, help teachers teach more efficiently, and help teachers articulate their knowledge of children's learning styles (Johnson, 1997).

Serafini listed some characteristics of a reflective inquiry structure, which include the following: provides information to help teachers make curricular decisions, is non-competitive, begins with learner's strengths instead of weaknesses, uses teachers and students as instruments of assessment, uses a variety of sources and methods to collect information including journals, projects and portfolios, and is ongoing, continuous, and extends over a long period of time. Each student in this type of educational structure is

seen as a learner instead of "raw material" to be molded into the perfect product as seen by society (Serafini, 2002).

Research literature from Rasmussen (1998), and Wynne & Walberg (1994), indicate that stability and intimacy are two fundamental characteristics of a looping design. Both of these characteristics are developed through long-term relationships, which are evident in looping classrooms. When students change teachers each year, it is difficult to develop these types of relationships (Nichols & Nichols, 2002). Nichols & Nichols (2002), reported that one reason schools have less influence on student development is due to the short amount of time students spend with the same teacher. Their study examined these areas through parent responses on surveys with results that found "looping parent responses were significantly more positive on several variables of interest, including parent and student attitudes toward the school environment and student motivation" (Nichols & Nichols, 2002, p. 18). Anecdotal comments suggested a possible positive "potential for a sense of community in looping classrooms" (Nichols & Nichols, 2002, p. 19).

When the classroom teacher spends more than one year with a student, there are more opportunities to form closer relationships with parents (Barnes, 1980; Rasmussen, 1998). As relationships develop, it becomes easier for both parent and teacher to deal with problems (Barnes, 1980). The result of a structure in which long-term relationships are developed, can create a "sense of belonging or community" (Nichols & Nichols, 2002, p. 3).

According to Grant et al. (1996), looping is a program, which allows students and teachers to progress to the next grade level together. "Looping is about the people

working daily in that classroom. Essentially, this practice promoted strong, extended, meaningful, positive interpersonal relationships between teachers and students that foster higher student motivation and stimulate an improved learning environment for students" (Burke, 2000, p. 3). The relationships built during the first year are continued in the second. Results of these relationships establish a deeper knowledge of the needs of the individual students. As teachers work with students, they begin to know how each child learns. According to Armstrong (2003), learning is acquired through the use of Multiple Intelligence's including: linguistic, bodily kinesthetic, spatial, musical, logical-mathematical, intrapersonal, interpersonal, and naturalistic intelligence.

"The importance of the relationships between teachers and students is crucial to students' academic and psychological development. The longer such relationships last, the better the chance they have of exerting a positive influence on the students" (Liu, 1997, p. 1). According to Liu (1997), teachers support the looping educational design, because they are able to establish long-term relationships with students allowing them to customize their teaching methods to meet the specific needs of their students. Pat Sanford, a second grade teacher at the Manatee Education Center who began teaching in 1976 explained that, "A lot of people my age are not open to change, but looping has really helped me to see what can happen in education" (Jacobson, 1997).

Multi-year Education

The theory of developing long-term relationships between teachers and students has been implemented in countries including Japan, Germany, and Israel. Elementary teachers in Japan stay with their students for a minimum of two years while the classes remain together for their entire elementary experience (Sato, 1993). "Family groupings"

are the main practice in primary grades in Israel, with Multi-year teacher-student relationships in content areas used in the secondary schools. (Grant, Johnson, & Richardson, 1996, p. 16).

In some German schools, heterogeneous groups are formed in the first year of school, where teachers and students stay together for the next four to six years. It is the belief of teachers at Germany's Koln-Holwide Comprehensive School that spending more than one year with a group of students increases the probability that relationships will become long lasting, creating a community atmosphere of cooperative learning (Ratzki, 1988). "Long-term relationships result in an emotional and intellectual climate that encourages thinking, risk-taking, and involvement" (Zahorich & Dichanz, 1994, p. 75).

Overall, long-term relationships help to create community atmospheres in classrooms throughout the world to expand each individual student's learning capacity as in the looping educational design (Sato, 1993; Grant et al., 1996; Ratzki, 1988; Zahorich & Dichanz, 1994). Schools in the United States moved at their own pace utilizing an agrarian calendar, which reflected the agricultural needs of society.

The American educational system moved to improve the curriculum following the Union of Soviet Socialist Republic launch of the spacecraft "Sputnik" on October 4, 1957, from the Baikonur Cosmo drone in Kazakhstan (Wright, 2002). As a result of this launch, "politicians and editorialists began attacking the U.S. educational system" (Wright, 2002). American society felt that it had to find a way to compete with the Soviets. The sciences were emphasized in order to meet the challenge "Sputnik" represented.

In 1986, *A Nation Prepared: Teachers for the 21st Century*, a Carnegie Foundation report, was published stating that without changes in the teaching profession, school reform would not happen (Carnegie Forum, 1986). School districts responded by experimenting with school organization and curriculum changes. Educators utilized grouping patterns such as homeroom, for developing a sense of family; mixed age, for cooperative learning; individual, for personal learning and all school, for community building (Goodland & Anderson, 1987). These findings led the way for development of other educational designs (i.e. looping) that would enhance the ability of public schools to provide society with methods to increase student learning.

The Third Annual Mathematics and Science Study (TIMMS) and A Nation at Risk were two highly publicized reports depicting the low academics of students in the United States (Peterson & Hassel, 1998). Half-million tenth grade students from the United States and forty-one other countries academics were compared. United States tenth graders performed near the bottom (Berlak et al., 1992). As a result, relationships within the school, and instructional pedagogy were emphasized with more efforts on standardized tests as a way of defining student achievement (Sergiovanni, 1994). This was one effort to improve educational practices.

In 1987, Paul S. George, a well-known researcher and educator from the University of Florida at Gainesville, studied Multi-year grouping at the middle school level. He "found that discipline was improved by the long-term relationship between teachers and students" (George & Lounsbury, 2000, p. 69). Positive results were reported from teachers and students who spent more than one year together. These results included teachers feeling that due to the development of a community atmosphere

in their classrooms, they were able to ask more of their students (George & Lounsbury, 2000, p. 70). Students "viewed their teachers as more caring, trusting, and patient" (George & Lounsbury, 2000, p. 70). The end result was that "students felt their teachers believed in them, and the longer students remained in the student-teacher progression program, the more they felt pride in their academic team" (George & Lounsbury, 2000, p. 70).

When people feel pride in their work, they produce a better product. The same is true for students. When they feel good about their academic situation, academic progress improves. Educators are continuously looking for ways to improve student achievement.

In 2001, the *No Child Left Behind Act* was developed, passed by Congress, and signed by President George W. Bush. This act was "designed to improve student achievement and change the culture of America's schools" (No Child Left Behind: A Toolkit for Teachers, 2003, p. 3). President George W. Bush (2003) stated, "by working together, we are building a culture where everyone can learn, and we are helping to create a future of hope, promise, and opportunity for all." Multi-year education and the concept of a community of learners are ways in which education has attempted to meet society's needs.

"As American society becomes larger and more complex, so do all of the institutions in which citizens abide and conduct their lives" (George & Lounsbury, 2000, p. 112). Therefore, it is important for researchers to develop methods of learning to help society compete with the ever-changing world (George & Lounsbury, 2000). The looping educational design, which has been developed throughout history, may be one

such method to help educational institutions (i.e. public schools) manage the changes in our society.

In 2003, Albert Brugger studied eighty students who looped and eighty non-looping students in eight different elementary schools in a Mid-western school district. The focus of this study was on reading scores obtained on a nationally standardized reading test. Students' reading scores in a grade 1 & 2 multi-year program were analyzed according to gender, socio-economic, and academic position. Data was collected through both pre and post tests utilizing ex post facto reading scores.

Findings indicated that a looping/multi-year structure had no measurable effect on reading scores. Specific area results led to the evaluation of the following: gender, socio-economic status (free or reduced lunch), and the academic position of students. Looping had no measurable effect on reading scores on either male or female students involved in a looping structure as compared to male or female students in a non-looping structure. Looping had no measurable effect on reading scores of students in various socio-economic statuses as compared to students in a non-looping structure. Looking at students' academic position, looping had no measurable effect on the reading scores of students in the upper or lower levels of their academic position. Data from this study indicated that looping or a multi-year structure had no significant difference on reading scores (Brugger, 2003).

Benefits of the Looping Educational Design

The looping educational design provides students with a variety of academic benefits, which have been proven through the actual implementation of looping (Grant et

al., 1996). School districts have shown these benefits through studies they have done on their own students to demonstrate the return on investment to parents and teachers. Studies like the Families Are Students and Teachers in East Cleveland (1997), Attleboro School District (1993), and Tolland Middle School (1995) have studied and discussed the benefits of a multi-year instructional design like looping.

Cleveland State University and the East Cleveland, Ohio Schools did a collaborative study entitled F.A.S.T., Families Are Students and Teachers (Hampton, Mumford, & Borid, 1997). Students participating in the looping educational design were compared with students in a traditional single year progression. Standardized achievement tests were used to compare the two groups. Results showed that the students in the Multi-year program scored higher on the achievement tests than their counterparts in the traditional classes (Hampton et al., 1997).

A quantitative study completed by Skinner (1998), looked at achievement. She used an analysis correlation to compare student achievement in reading, language arts, and math. No statistically significant difference was indicated in math or reading between students who were involved in a looping structure as compared to a non-looping structure. A statistically significant difference was indicated in the area of language arts. Data collected during this study adds more evidence that a looping/multi-year structure has no statistically significant effect on reading or math achievement.

Sherman (2000) looked at middle school students, as did George (1987), specifically eighth grade looping and non-looping students. Data was derived from the Iowa Test of Basic Skills (ITBS). The results found no significant difference in math or reading scores of looped or non-looped students. Interestingly, Sherman did find a

significant difference in a sub group of looped and non-looped female students. Females who participated in a looping structure scored better in science than their counterparts in the non-looping structure.

Fuller (2006) looked at a 7-8-grade loop and found that there was statistically significance for the looping students in math and reading as compared to those in the traditional single year design. The Mississippi Curriculum Test for Middle School Students was used to measure reading achievement; it was found that "looping was significantly related to improvement in reading achievement" (Fuller, B.D., p7). The educational environment along with the concept of long-term relations was found to be of great importance for middle school students. In this study, it was this environment for which Fuller stated, "any school with a nurturing learner-centered environment, staffed by competent, caring teachers who fully implement practices should be able to document positive student outcomes" (Fuller, B.D., 2006, p.10). Fuller indicated that the study clearly demonstrated the positive effects of looping on total reading. However, in Gilliam's 2005 study, questionnaires and interviews of middle school teachers were used to find out if a looping design positively affected student achievement. The findings were inconclusive.

Lavendar (2005) studied the effectiveness of a looping design for kindergarten readiness. An experimental comparison design was used utilizing Ex post facto data. Lavendar studied the emergent reading development and kindergarten readiness of looping and non-looping four-year old students. No statistical difference between scores was found.

When Thomas (2006) studied the effects of looping and exceptional students for math and reading, no significant difference was determined between students who looped and those in non-looping classes. A causal comparative study was used to compare math and reading scores of students in both looping and non-looping students.

Educators continue to look for ideas, which will benefit student learning. One idea, which has been looked at is that of long-term relationships (Checkley, 1995; Chaika, 1999; Grant, Richardson, and Forsten, 2000).

Educators have found that elementary aged children's learning is based on relationships and looping gives them the time to establish those relationships (Johnson, 1998). A great deal of a child's learning is based on relationships, says Sue Bredekamp, director of staff development for the National Association for the Education of Young Children (NAEYC). A looping schedule, she says, gives children time to build those personal relationships, time they would not have had in a typical nine-month schedule (Checkley, 1995, p. 1).

Overall, teachers seem to support the looping educational design because they are able to establish long-term relationships with students allowing them to customize their teaching methods to meet the specific needs of their students (Grant, Richardson, and Forsten, 2000). Teachers also feel that looping allows them to maintain the educational process throughout the year not just the standard nine-month school year (Checkley, 1995).

The development of long-term relationships is another key benefit to the looping educational design. Teachers have the opportunity to plan the activities for the second year after they have already developed a relationship with the students. Therefore, the

teachers know which activities and teaching methods fit with the specific needs of their students.

> After a year, Oldham says, she has learned a lot about each student's skills and strengths. During the summer, 'I think about certain children who are having behavior or academic problems and ask myself, what can I do to help this child? With looping, 'you don't have to start from scratch with each child" (Rasmussen, 1998, p. 2).

Educators have found that elementary aged children's learning is based on relationships and looping gives them the time to establish those relationships (Johnson, 1998).

The research continues to search for solutions to the question as to how to provide the best educational learning environment, which will provide optimal learning. Long-term relationships between students and adults have been seen as a foundation for academic learning (Chaskin and Rauner, 1995; Shore, 1996; & Testerman, 1996).

Students have also commented on their own personal experiences in regards to looping. It is important to have students satisfied with the looping educational design because they actually experience the advantages or disadvantages of the program. Eighth grader Lauren Trimble added, "Looping is comforting on the first day of school, when there is so much going on. If you already know your teachers and their style of teaching, it makes the beginning of school a little less stressful" (Chaika, 1999, p. 2). Stress and anxiety are common summer traits students have in a traditional single year progression. They do not know who their teacher is, or what expectations will be demanded. Personal experiences affect student learning, as does the environment in which they exist on a day-to-day basis.

> I like to be with the same kids year after year, said John Van Valkenburg, an eighth grader who has also been with the same teachers for two years now. "I feel

> closer to this group than some of my family because we have shared so many of the same experiences (Chaika, 1999, p. 1).

These students have shown how some of the advantages of looping have strengthened their educational experience. However, there are children who have experienced some disadvantages with the looping educational design.

> I had the same teacher for first through third grade, said eighth grader Jeanne Miller, and she was absolutely wonderful. I loved having her teach me so many years in a row. However, when the time finally came to move on, I found it hard to detach from this person who had taught me for so long. I remember crying on the last day of school, knowing that I wouldn't be in her classroom again. I felt abandoned and lonely. (Chaika, 1999, p. 2).

> And according to Matt Hoffman, the big disadvantage I saw was that in the real world I will probably have to make many changes in my life. Learning how to adapt to changes in the way you work is something that will help you adapt to change later on, and I think learning how to deal with change is something that should be learned when young" (Chaika, 1999, p. 3).

Along with educators, like Rappa, researchers like George (1987), Sherman (2000), and Brugger (2003), have added to the research base of multi-year educational designs such as looping, more quantitative data is needed in order for future educators to be able to determine if a looping educational design would be beneficial for their district.

The Learning Bridge of Looping

Students entering the second year of a loop are less anxious than those in a single year progression, (Grant, 1999) and teachers gain approximately six (6) weeks of instruction (Boyer, 1991). Time spent on instruction, instead of time spent on assessments, is what Jubert (1996) described as one of the "greatest benefits."

Another benefit of the looping educational design that builds a student's academic skills, is a concept called the "summer bridge." The bridge helps students "maintain a continuous, year round flow of learning" (Forsten et al., 1999). According to Liu (1997),

an educational design such as looping can gain approximately six (6) weeks of time by the end of the second year.

Reynolds (1999) discussed the fact that looping may be an alternative to retention. Looping allows those students who may not be ready, to have an extended time to develop the necessary skills in a positive educational climate.

Empirical Evidence

When implementing different educational methods, it is important to have research-based data to support the choice. Quantitative research on multi-year/looping is sparse. However, there are many comments from parents, teachers, and students regarding their looping experiences. In 1997, a study was conducted on the impact of the looping classroom environments on parental attitudes.

Four hundred fifty-five parents from seven elementary school sites (63 males, 391 females, and 1 no specified gender) completed the survey. These respondents were parents of 224 male and 230 female students. Of these 455 respondents, 141 were single parents. One hundred ninety four parent respondent's state that their child received a reduced or free lunch supplement (Nichols & Nichols, 2002, p. 3).

The results of this analysis suggested that parents of Multi-year looping children had significantly more positive attitudes toward their child's teacher and school and had positive perceptions of their child's behavior at school than did parents of children with non-looping and first-year looping backgrounds (Nichols & Nichols, 2002, p. 4).

From 1998-2000, a looping program was developed, and implemented in a K-2 elementary school in New Jersey (Chirichello & Chirichello, 2001). Surveys were sent to parents and students regarding their views on looping at the end of the first year, and

again at the conclusion of the second year (Chirichello & Chirichello, 2001). "The preliminary surveys indicated that parents believed that looping would benefit their child emotionally, socially, and academically" (Chirichello & Chirichello. 2001, p. 3). The survey administered at the end of year two added additional parents' statements in regard to the overall looping experience.

> The results indicated that a majority of parents did not want a three-year looping experience if it were offered (and it was not). Statements about choosing looping again, recommending looping to other parents, the children's happiness with the looping experience, and children's contentment being with the same teacher and classmates for two years were all rated agree to strongly agree. (Chirichello & Chirichello, 2001, p. 4).

The surveys administered in June 1999, and May 2000, have reinforced a parent's willingness to support the looping educational design as long it is helping his child grow emotionally, socially, and academically through an enhanced parent, teacher, and student relationship.

George (1996), Jubert (1996), Liu (1997), and Chirichello (2001), found that looping increased the actual instructional time for teachers and helps teachers develop long-term relationships with students, which enables them to gear their instructional time towards the specific needs of their students. Teachers involved in Looping are reporting similar findings. "You can start teaching right away. They [students] know what to expect and they get right back into it" (McDade, 1998, p. 2). Knowing the rules and classroom procedures adds instructional time due to the fact that teachers do not have to spend time explaining them to students. "A 1st and 2nd grade teacher, in Golden, Colo., appreciates that looping, in addition to giving her more teaching time, permits her to address topics when children show they are ready for them" (Rasmussen, 1998, p. 2).

Multi-year/Looping educational designs, allow educators to increase the amount of time spent with students. The additional time, allows educators the ability to be more creative in designing educational activities meeting the needs of the individual student. According to Grant (1996), it also gives educators additional time to make the high stake decision of retention.

Gender

In education, some researchers believe that it has become apparent that there are two worlds existing in our classrooms "one of boys in action, the other of girls inaction" (Sadker, 1994, p. 42). The females that are experiencing this "inaction" throughout their school years are described as "invisible members of classrooms" (Sadker, 1994, p. 1). Although few studies have looked at the academics of students as impacted by a multi-year (looping) program, measured by standardized tests, only a few of them have looked at how looping impacted a particular part of the student population including gender.

Peterson (2000) looked at gender as a subgroup to see if looping had an effect on academics as measured by standardized tests, and found that there were no significant differences in achievement. Sherman (2000) again looked at gender and the possible impact of looping, and found no significant relationship between looped and non-looped students as a whole. However, he did find a significant difference in females who looped and females who did not loop.

These results reflect data from studies of gender and how it affects academic achievement. Sadker's book *Failing at Fairness: How our Schools Cheat Girls*, describes how teachers interact more with boys by asking them better questions and giving more exact and beneficial feedback. One of the benefits of looping is that teachers

gain more knowledge of their students' strengths and weaknesses, which allows for better instruction. Therefore, the teacher's knowledge helps both boys and girls in their quest for academic achievement.

Knowing students' strengths and weaknesses helps teachers when they establish academic expectations and how they interact with each student. Factors that may shape teacher-student interactions include behavior and student achievement (Jones & Dindia, 2004, p. 449). These interactions and expectations may affect how gender plays a role in academic success.

In Hall and Sandler's (1992) "Chilly Climate" study, they were able to document that "teachers call on male students more than females and that when looking at how often students are interrupted by teacher, girls are interrupted more than boys" (Jones & Dindia, 2004, p. 443). This factor may lead to boys achieving better academically than girls. When students spend more time on task, learning improves. In a multi-year program, students and teachers have more instructional time available due to the long term relationships developed over more than one year with the same teacher (Boyer, 1991; Checkley, 1995; Chaika, 1999; Chirichello, 2001; Denault, 1999; George, 1996; George, 1998; Grant, Richardson, & Forsten, 2001).

"According to the U.S. Department of Education, boys have fallen behind girls in academic achievement" (Bauza, 2005). When you look at schools around the country, you find more boys in learning support classrooms, and more boys lined up in nurses' rooms waiting in line for attention deficit disorder medication. Bauza (2005), in her article, Boys fall behind girls in grades, states that over the last thirty years "more boys than girls have been diagnosed with attention deficit disorder than girls." In traditional

single year classrooms, the physical active nature of boys is looked at as either some form of Attention Deficit Disorder (ADD), or Attention Deficit Hyperactive Disorder (ADHD).

Teachers have only one school year to teach each student the standards listed for their particular grade level. In a multi-year educational design, a teacher has more than one year to evaluate, learn, and create activities which will help each student learn, even those who may be more active. Teachers are able to create activities and provide learning experiences, which meet the developmental needs of both boys and girls. Educational environments need to change in order to meet the needs of all students. "Educators are aware of it and are just starting to take steps in implementing changes in school cultures" (Bauza, 2005, p. 5). Educators around the world are aware of the need to bring about change in educational programming. Researchers have been studying the trends in gender, and the affect it has on academics.

"One of the *National Priorities in Education* (2000) is to equip pupils with the foundation skills, attitudes and expectations necessary to prosper in a changing society and to encourage creativity and ambition" (Scottish Executive, 2005, p. 9). Scottish schools have looked at gender and how it affects students' academics finding that there is evidence of gender differences at all levels of Scottish education. Educators in Scotland have found that girls tended to perform better than boys (Scottish Executive, 2005). Research conducted by the Centre for Educational Society did not show gender differences in achievement in reading and mathematics at the beginning of their schooling, but the difference became apparent at the end of the year. This data demonstrated that gender affected students' academics throughout the year. Education in

Scotland begins between the ages of 4 and 5 in primary school. (Scottish Executive, 2005).

For more than thirty years Scottish educators have been concerned about the differences between boys and girls academics. Gender is a variable, which has been looked at as far as academics in the classroom. "Researchers report a variety of effects of gender in the manner with which males and females interact within a particular setting" (Okeke, 2004, p. 1). Scottish educators have been looking for ways to raise academic standards, just as American educators. Educators have found that "the average level of attainment in school examinations for boys is lower than for girls" (Scottish Executive, 2005, p. 2). In this study, one of the variables will look at gender to see if student academics are affected by a multi-year educational design. In Scotland, the Early Intervention Programme (EIP) reported that girls score higher than boys in reading at the end of year 3 (Scottish Executive, 2005). Another program, the Assessment of Achievement Programme (AAP), showed a continuation of this trend. However, the report did not show "conclusive evidence for mathematics in the primary level" (Scottish Executive, 2005, p. 2).

Data from the National Survey showed that based on a sample of Scottish Primary schools, girls performed better than boys in reading and math at the end of P2 (Scottish Executive, 2005, p. 2). This pattern of gender difference levels in academic achievement continues for Scotland's students through P7. Reading differences are substantially different than math. Achievement patterns continue on to a student's secondary education (Scottish Executive, 2005).

Multi-year educational designs are designed to afford teachers extra time to know their students' strengths and weaknesses. Will males' dominant math such as they do in Scottish schools, while females perform better in the area of reading? Math is considered a masculine subject, in which males perform better than females. Reading is considered a feminine subject with females performing better than their male counterparts. (Ohiri-Aniche, 1998, p. 53). In a traditional year design, males would excel in the masculine subject of mathematics, while the more feminine subject of literature would see females excelling. (Ohiri-Aniche, 1998).

Wheat (1997) reported that the results from the National Educational Longitudinal Survey (NELS) indicated that females out performed males in reading. However, "by the time boys reached high school, boys are performing marginally better than girls" (Wheat, 1997, p. 2). Data on gender and its effects on academics have been compared using standardized tests to determine which group is more disadvantaged (Herr & Arms, 2004). The research tends to lean toward males performing better in math, while females perform better in more feminine subjects such as reading and writing. A traditional single year design limits a teacher's time to create activities to help students reach their full potential, while the design of a multi-year adds extra time at the beginning of the second year. Will this extra time enable females to perform at the same rate of males in math? Will males catch up to females in academic areas such as reading in a looping design?

Multi-year designs such as looping provide additional time. The extra time allows teachers to know and understand their students in a more in-depth way. Checkley (1995), in her article, relates how a third (3rd) grade male excelled in both reading and

mathematics. In the second year of a two-three loop, his teacher was able to create a curriculum, which enabled her to "tap his unique abilities" (Checkley, 1995, p. 8).

The study will look at this type of scenario to determine if a multi-year educational design allows gender differences in the academic areas of mathematics and reading to disappear. The gender variable will provide data to determine what, if any affect a multi-year design has on the academic progress of males and females.

High Stakes Decisions: Retention

A design in which the "high stakes" (Grant, 1996) decisions made at the end of the first year, do not need to be made until the second year. This provides looping teachers more information to make these critical decisions.

When a student is retained, he spends an extra year learning the same curricula. According to Jim Grant, "some students need extra time, not an extra year." He describes the Multi-year structure as a "Learners' Runway." This structure allows the student to spend the time needed to learn, and then move on instead of spending the extra year in the same single year grade (Grant, 1996).

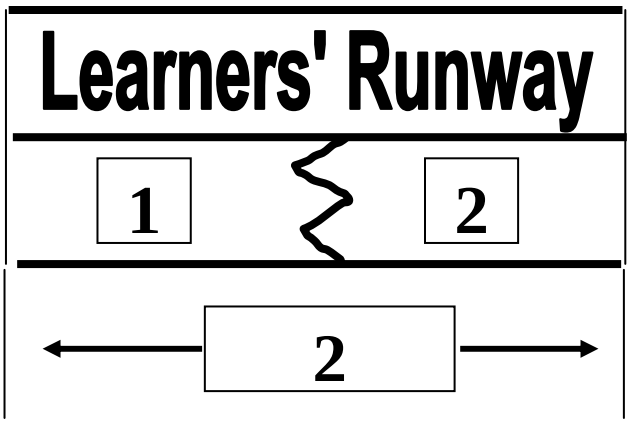

Figure 1: Learner's Runway (Grant, 1996, p. 2)

Reynolds (1999) article, Looping: A Solution to the Retention v. Social Promotion Dilemma, discussed looping as an alternative to retention. Looping allows those students who may not be ready, to have an extended time to develop the necessary skills in a positive educational climate. A climate enriched with long-term relationships yielding consistency, and a feeling of nurturing. This type of environment develops a sense of family. Students learn and cooperate easier in such a positive climate (Reynolds, 1999). When a feeling of family exists in this educational community, educators are able to look closely at members in order to make good educational decisions. Looping provides time for educators to make good decisions.

Remediation Through Looping

When students and teachers spend multiple years together, it allows teachers to develop an in-depth knowledge of each student. Knowledge of students' personalities, learning styles, strengths and weaknesses enables teachers to be creative in their teaching practices (Gaustad, 1998). The looping structure of multi-year instruction adds extra time for teachers to diagnose weaknesses and work on ways to remedied students through developmentally interventions. The structure creates a family style of environment through long-term relationships, bringing stability.

The traditional one-year progression severs the student/teacher relationship after 180 days. Just as a student/teacher relationship begins to develop and students become confident in their environment, tradition dictates that students move onto the next grade level and a different teacher. "We don't change dentists or doctors every 36 weeks," said Jim Grant, the New Hampshire-based co-author of several looping books. "In schools, we build trust and reliability and then sever it every 36 weeks" (Trejos, 2001).

According to Grant (1996), traditional single year school terms force teachers to make academic decisions, which may lead to retention, progressing on to the next grade, or referring students for possible special education placement.

When student/teacher relationships cover multiple years, it allows more time to monitor student progress instead of making special education referrals. Jim Grant, in his article, *In the Loop*, stated that an important benefit of a second year is "to continue the relationship built during the first year." James Comer, Director of the School Development Program at Yale University, said, "no significant learning occurs without a significant relationship" (Grant, 2000). The relationship developed in a multi-year design allows teachers to know the strengths and weaknesses of each student and provides extra time to diagnose students' needs.

Looping and Learning Disabilities

One of the drawbacks to a multi-year design comes when evaluating for possible specific learning disabilities. "Because students are worked with so closely, and improvement monitored, often a learning disabled student may be overlooked. This is called the Halo affect of looping" (Olson, 1998, p. 3). The additional time teachers spend with students, amounts to almost a month of teaching time (Hanson, 1995; Mazzuchi & Brooks, 1992). Time enables teachers to create innovative activities, which may add to the Halo affect due to their increased knowledge of the student. Extra time increases the number of chances that are available for teachers to make connections with their students during learning (Zahorik & Dichany, 1994; Checkley, 1995). Extended time becomes an opportunity for additional learning. Educators continue to search for ways to gain support for students who need stabilizing influences. A two-year program can be

somewhat more flexible than a single year program, in which the curriculum tends to be very unforgiving to students who are differently-abled (Grant & Johnson, 1996). Educational leaders look at various programs, which will help all students, including those with the greatest needs.

Social Promotion and Looping

Joseph Rappa, Chief Educational Administrator of the Attleboro School District in Massachusetts turned his district totally over to Multi-year practices in three years. Students from kindergarten to twelfth grade looped with their teachers for a two-year period (Rappa, 1993). His goal was to provide his students and teachers with more time, which would ultimately enhance their educational experience (Rappa, 1993).

> Student attendance in grades 2 through 8 has been increased from 92% average daily attendance (ADA) to 97.2% ADA. Retention rates have decreased by over 43% in those same grades. Discipline and suspensions, especially at the middle schools (grades 5 through 8) have declined significantly. Special education referrals have decreased by over 55%, and staff attendance has improved markedly from an average of seven days absent per staff member per year, to less than three. Think of the recovery, not only of costs, but also of time, time for learning (Rappa, 1993, p. 3).

Teachers involved with the F.A.S.T. study, "reported an increased sense of ownership for student outcomes (both positive and negative), and a heightened sense of efficacy" (George & Lounsbury, 2000, p. 73). Results of project F.A.S.T. suggest that it has merit in terms of eliminating "social promotion." Bracey (1999) believes that the longer you spend with a student, the better you can meet the student's individual needs. "There are many benefits from a looping program, but one of the greatest is the additional learning time that occurs because significant time has been saved at the beginning of the second year of each subsequent loop" (Jubert, 1996, p. 37). Teachers save time assessing

students skills because they already know and understand each student's educational, social and emotional needs. Saving this time, gains the teacher an additional month at the start of the second year (Hanson, 1995).

Teachers reported that an extra month of instruction was gained at the beginning of the second year due to students knowing the routines and class rules, there was less anxiety at the beginning of the second year, and strong bonds were formed with students having less consistency in their personal lives (Hanson, 1995). Spending more than one year with a group of students provided consistency and allows teachers to deepen their knowledge base of each student.

Socio-economic Disadvantaged Learners

Ron Paige, Secretary of Education, in a commencement address at the University of Connecticut in 2001 explained:

> Nearly seventy percent of inner city and rural fourth graders cannot read at even a basic level. Imagine that: in the greatest, wealthiest nation the world has ever known, nearly seven out of ten fourth graders in big cities and rural areas cannot read. It is our greatest failure as a nation. It is our failure as a people, and we must do something about it.

The achievement gap between socio-economically disadvantaged students and others has been a topic of study for researchers and educators. The study will examine the effect looping has on academic achievement, retention rates, and special education placements of socio-economic disadvantaged students. Students in Title I free and reduced lunch programs will be the determining factor placing students in this category.

There have been several reasons from educators to explain this gap. These include: they are poor; their parents don't care; they come to school without breakfast; and they don't have enough books in their home. The adults always state that reason for

the gap is due to the children and their families. However, when you talk to students, they report that they are taught less than other students (Haycock, 2005). In 1966, a report came out entitled "The Coleman Report," which concluded that family poverty was the main cause of the achievement gap (Coleman et al., 1966). Whatever the cause, lower teacher expectations, lack of parent support, or the inability of parents to provide books, the fact still remains that socio-economically disadvantaged students are still scoring lower on academic tests and in the classroom (PDE, 2005).

Public education is not providing an appropriate education for those students who are deemed socio-economically disadvantaged. The data indicates that by the end of fourth grade, socio-economically disadvantaged students are two grades levels behind in mathematics and reading. By the time they get to eighth grade, they have fallen to three grade levels behind in mathematics and reading. (Turner Foundation, 2005). Educators must find a way to educate all students.

Methods and teacher perceptions need to be addressed. Some teachers believe that socio-economically disadvantaged students require a specific type of instruction on basic skills (Mayer, 1994). According to Haberman's (1994) Pedagogy of Poverty, it was reported that mathematic instruction in urban schools is based on rote learning with an authoritarian teaching style. In a multi-year program, teachers get to know the learning styles of the students and are better able to meet their individual needs.

Concerns

Multi-year programs, as discussed offer several potential benefits for students. However, with any program, people involved with programs have concerns as they evaluate each program. Some of the concerns educators and parents have with multi-year

programs included: the teacher's familiarity with the curriculum for two grade levels, personality conflicts, the effectiveness of the teacher, and eventual separation.

For instance, when a teacher begins a looping experience, they are usually familiar with the grade level curriculum. However, when the same teacher decides to loop, they have to learn a new grade level curriculum. This leads to what some feel is a loss of time at the beginning of the second year. One way of remedying this concern is to develop and implement an effective staff development program, which allows the teacher time to learn and develop activities for the new curriculum. Teachers should also have the opportunity to visit classrooms and attend conferences, which will help in the development of new teaching activities and techniques.

Personality conflicts can occur between students and teachers, teachers and parents, and/or students and students. When teachers, students, and parents meet each other at the beginning of a traditional single year school year, they know that each will be moving on to another placement at the end of the year. However, in a multi-year educational design this is not the case. To alleviate this concern, administrators can offer parents the option to place the student in a different classroom for the next school year. Prior to the development of class rosters, meetings need to be held with all interested individuals in order to develop a good educational placement. Burke (1997) states in his paper *Looping: Adding Time, Strengthening Relations* that the only potential disadvantage of looping regularly mentioned is an inappropriate match, or personality conflict between teacher and student, which can be solved by transferring students to another teacher (Grant & Johnson, 1995).

Parents have also been concerned with the possibility of their child having an ineffective teacher for two years (Jordan, 2000). It is the responsibility of each administrator to make sure that the appropriate educators are selected for the multi-year classrooms.

After two years of learning in a community of learners, separation becomes a concern for both teachers and parents. Parents, students, and teachers build a strong bond over a period of two years. When the time comes to separate, some of the participants experience this difficulty, but usually dissipates as the new bonds grow (Grant, 1996).

According to Burke (1997), Grant (1996), Johnson (1995), and Checkley (1995), the potential advantages of looping out weigh the potential disadvantages. It is important to balance the individual needs of each student with the advantages of the looping educational design. Schools have tried multi-year programs as solutions for various reasons. Economic, educational, and what is felt to be the best for children. Many schools have tried and discontinued multi-year designs because teachers did not mesh well with students and parents, or simply did not anticipate all the work they had to do to learn a new curriculum (Trejos, 2001). Multi-year programs have been discontinued because of teacher mobility or the lack thereof. In a multi-year design, teachers are constantly moving; therefore they do not build up years of seniority in a single grade level. Therefore, it is important not impose a multi-year placement on teachers. (Olson, 1998). Further, Olson (1998) believes that parents should also have the choice of having their children placed in the multi-year program.

Summary

The literature supports the varying societal needs and how education addressed those needs. The one-room school met society's needs of early American parents and the community in which they lived and worked. Students in these educational environments studied the basics needed for their community including: reading, writing and arithmetic.

When the population increased with the influx of immigrants from Western Europe and communities expanded to urban areas, the next societal need was to create a method to educate an ever-increasing population. Horace Mann developed the common school, which he thought was the great equalizer (Cremin, 1957). The common school theory was the beginning of the separation of students by specific age levels. It has been this system, the Factory model of education (Serafini, 2001), which has been the prominent education system in the United States since the late 1840s (Forsten et al., 1999).

The literature chronicles society's needs for an educational system, which will meet their educational needs. Boyer (1991) reports that more and more families become single parent families. Children in these situations need consistency, which could be developed through long-term relationships. Long-term relationships developed in a multi-year, looping program, may be such a program reformers look for to meet societies changing educational needs.

Reformers such as Steiner (Waldorf Schools), Montessori (Montessori Schools), and Sizer (long-term relationships) created educational environments, which addressed society's needs to bring stability to students. The idea of long-term relationships and families were a way to address these needs.

According to Grant (1996), looping was not new. Looping allows teachers to gather more information to make critical decisions effecting the students' education. Reynolds, in his 1999 article, *Looping: A Solution to the Retention vs. Social Promotion Dilemma,* discusses the fact that looping may be an alternative to retention.

A pilot program in Tolland, Connecticut looked at discipline and found that "there were fewer infractions for looped eighth graders than the non-looped control group" (Lincoln, 1998). It is apparent in these studies that looping has positive effects on behavior and attitudes. A report from Attleboro, Massachusetts found that student attendance improved, test results improved, special education referrals decreased, and retentions decreased (Rappa, 1993).

Only a few studies attempted to make the connection between looping academic achievement (Chaika, 1999). Paul George, a researcher from the University of Florida in Gainesville, studied middle schools from across the country. In this study, teachers reported that looping improved student behavior, helped teachers build on student's strengths, and improved academic performance for the lower achieving students (George, 1987).

Jim Grant stated, "looping is about time, giving kids extra time" (Jacobson, 1997). Theoretically, the looping structure adds flexibility for teachers in order to improve instruction (Forsten, Grant, Johnson & Richardson, 1997; Lincoln, 2000).

CHAPTER III

DESIGN OF STUDY

Introduction

The purpose of this study is to determine if there are increased benefits in a looping instructional delivery system, as it pertains to academic progress, retention rates, and special education placements. Specifically, the study will determine if there is a significant difference between students involved in a looping instructional model as compared to those not participating in a looping model. The study will determine the impact looping has on the academic achievement as measured by standardized test scores in Reading and Mathematics for specific portions of both student populations. Those populations include gender and socio-economic disadvantaged students enrolled in both looping and non-looping programs. The following research questions will be asked:

1. Will a looping placement positively impact the academic progress of males in math?
2. Will a looping placement positively impact the academic progress of females in math?
3. Will a looping placement positively impact the academic progress of males in reading?
4. Will a looping placement positively impact the academic progress of females in reading?
5. Will a looping placement positively affect retention rates?
6. Will a looping placement positively affect special education placements?

7. Will a looping placement positively impact the academic progress of male students?
8. Will a looping placement positively impact the academic progress of female students?
9. Will a looping placement positively impact the academic achievement of socio-economically disadvantaged students?

Educators seek methods to improve teaching and learning so that students' learning increases (Forsten et al., 1999). Policies and/or studies developed by both Federal and State governments, such as *A Nation At Risk* (1983), and *No Child Left Behind* (NCLB) (2001), have challenged educators to examine ways to improve instruction. States have established new standards and goals to comply with NCLB. Because of these new standards and goals, many districts are looking at new programs, teaching methods, organizational plans, and instructional designs in an attempt to ensure success (Bogart, 2002, p. 67). The two districts included in this study have looked to a multi-year educational design to meet the educational needs of students.

The multi-year program design was used throughout the United States in the form of the one-room school until the late 1950s. One-room schools began to consolidate into local school districts with separate schools for younger and older children during the 1960s. "The idea of a separate teacher for each grade level has become an expectation for many parents and students." (Grant, 2000, p. 2). Districts educated youth according to the needs of the community. The "new" schools began to look like Serafini's (2002), "Factory Model." Leaders of society (business and governmental) were asking for accountability from the educational system in return for their investment. If workers

come to them untrained, they have to spend time and resources to bring them up to speed (Serafini, 2002). The "Factory Model" of education, as described by Serafini (2002), is a way leaders can control the system and maintain accountability. Ferguson explained test scores and their importance in the following manner, "test scores measure the speed and accuracy of reading and calculating skills that employers value" (Ferguson, 1999, p. 91). States are using large scale testing to measure success, in order to comply with the "No Child Left Behind" legislature of 2001 (No Child Left Behind Act, 2001). Pennsylvania currently uses the Pennsylvania System of School Assessment (PSSA) to measure student, school, and district success.

Target Population

The target population of this study will consist of looping and non-looping students in third, fifth, and eighth grades, who attended rural elementary schools in the School District A and School District B. Both districts are located in central Pennsylvania. The students would have attended the districts between the years of 1999-2005. School District A is a rural public school district encompassing over 50 square miles, while School District B encompasses 172 square miles. The elementary school attendance areas, which will be involved in the study, encompass over 24.35 square miles for School District A and 172 square miles for School District B. School District A's elementary school included in the study, is one of four elementary attendance areas, while School District B has one elementary school located in the center of the district. The building serves all students of the district. A large portion of the tax base in both school districts, are supported by single-family homes. District population in School

District B is 18,282 and in School District A is 16,226. The elementary schools' populations are 250 in School District A and 600 in School District B, based upon the 2000 United States census data.

Students will be selected from both looping and non-looping programs. Participants will be chosen from students who were associated with these elementary schools from 1999-2005. Historical data will be obtained from archived information retrieved using the Comprehensive Data Analysis for School Improvement (CDA) system (Allegheny Intermediate Unit, 2002). The Comprehensive Data Analysis program was developed to help school districts keep track and monitor student data. Data is archived in a computer database, accessible by district administrators. SAT 9 scaled scores in Math and Reading in one district's third grade, and TerraNova scaled scores in Math and Reading, will be analyzed for the third grade year. PSSA scaled scores in Math and Reading will be analyzed for the fifth and eighth grade years. Gender, socio-economic background, retention rates, and special education placements will be analyzed as factors, which may have been affected by the looping program.

Socio-economic disadvantaged status for both districts will be determined through the students who qualify for the free or reduced lunch program. Math and Reading scaled scores in third grade as measured on the TerraNova and SAT 9th edition, and PSSA math and reading scaled scores in fifth and eighth grades, will be analyzed to determine the answers to the academic questions.

One hundred sixteen students will be selected from both looping and non-looping programs for participation in the study.

Method of Sample

The method of sampling will be a random sampling of students, (looping and non-looping) who attended school between the years of 1999-2005. Students were assigned as per their parents' choice of the educational design. The researcher will use sixty students for the looping experimental group, and fifty-six students for the non-looping control group. These students reflect the students whose parents chose either educational design. Students were not chosen due to their academic or any other qualification. Both groups are similar except for the educational design, and any differences are due to chance.

The experimental group will contain students who spent two years with the same teacher (Looping). This group will include sixty students from two South Central Pennsylvania school districts.

The control group will include students from a traditional single year design (Non-looping). This group will include fifty-six students who attended elementary school in the same two South Central Pennsylvania school districts. The control group was in third grade during the 1998-1999 school year. The 1998-1999 school year was the first year of a three-four grade loop. The control group was in fifth grade in 2000-2001 and eighth grade during the 2003-2004 school year.

School districts were chosen due to the similarities in the demographics, and the researchers ability to collect the data from both school districts because they both offer a choice of either looping or a traditional single year progression. Criterion to select students in the experimental group will be determined by attendance in a looping

program. Students will be excluded from the experimental group if they participated in a traditional single year, non-looping progression.

Students included in the control group will be based on attendance in a traditional single year (non-looping) progression. The exclusion criterion, which will be used to exclude students from the control group, will be students who participate in a looping progression.

Measurement Scores

Academic progress (math and reading) of students, who participated in looping or non-looping instructional model, will be measured through a causal-comparative regression analysis. The researcher will compare scaled scores mathematics and reading scores from third grade SAT 9 and TerraNova scores, fifth and eighth grade PSSA evaluations from both students who participated in the looping model, as well as those who did not participate in the looping model. The scores will be obtained from students records listed on district archives through the Comprehensive Data Analysis for School Improvement (CDA) support system. CDA was developed by staff at the Allegheny Intermediate Unit 3 to help districts utilize data for evaluations and decision-making. This comparison will be used to determine the amount of academic progress of those students who were involved with the looping and traditional single model.

Each spring, fifth, eight, and eleventh grade students across Pennsylvania, are mandated to take an evaluation known as the Pennsylvania System of School Assessment. It is comprised of multiple-choice and open-ended questions in math and reading completed over a four-day testing period. Both districts have chosen to initiate testing earlier using either the SAT 9 or the TerraNova. Both tests use a multiple-choice

question format, with revisions developed to update content in order to align with current curricula trends and update norms (Assessment Committee, 2002). The testing environment is established to maximize accurate measurements of student progress.

The Pennsylvania System of School Assessment (PSSA) was established by the Pennsylvania State Board of Education to establish rigorous academic standards and assessment. PSSA was "to facilitate the improvement of student achievement and to provide parents and communities a measure, by which school performance can be determined" (Pennsylvania Bulletin, 2001). The State Board of Education adopted regulations in January 1999, which established proficiency levels. The levels and cut scores were determined and adopted for math and reading in scaled scores on May 10, 2001. Specific levels include Advanced (>1563), Proficient (1236-1562), Basic (1088-1235), Below Basic (<1087) (Pennsylvania School Report, 2004). This evaluation tool provides both criterion-referenced and norm-referenced information. Criterion-referenced information allows "students and school results to be described with reference to the state's academic standards" (Zwerling, 2002, p. 4). Norm-referenced information permits the achievement of students and schools to be compared with other schools and students across the state.

Two studies were reviewed in an attempt to determine the reliability, how similar a student's score on an assessment would be if they took it the same assessment several times, and the validity, does the instrument measure what it was reported to measure of the assessments which will be used for the collection of data. The first was a critical analysis of the PSSA, TerraNova, and SAT 9 titled The Performance Levels and Associated Cut Scores on the Pennsylvania System of School Assessment Mathematics

and Reading Tests: A Critical Analysis. This study, conducted by the PSEA & PASA, looked at four districts, which used the above-listed assessments. The results found that there was a "strong relationship between performance on the fifth grade PSSA Mathematics test and the commercial tests" (Zwerling, 2002, p. 29). There was also a strong relationship between the performance in reading on the fifth grade PSSA and the commercial tests. Evaluating these results would suggest that there was a positive relationship between the cut scores on the PSSA and scores on the commercially produced assessments.

The PSSA is standards based criterion-referenced test, which Pennsylvania school districts use to measure students' attainment of the academic standards developed by the Commonwealth of Pennsylvania. This state assessment is administered to all third, fifth, seventh, eighth, and eleventh grade students in the spring. The state has developed a testing window, which standardizes testing. Districts also elect to administer additional commercially produced tests. This allows districts to compare student scores with the norm-referenced scores produced by the commercial TerraNova and SAT 9. Districts are able to compare the student scores from the PSSA, to a nationally normed sample produced on the commercial tests, which are norm-referenced. Scores produced from commercial tests provide important data in order to investigate the convergent validity of the PSSA.

Two concepts are used to determine the quality of each assessment, the tests reliability and its validity. Reliability measures the consistency of an assessment. The Human Resources Research Organization conducted the second study, Relationships among the Pennsylvania System of School Assessment (PSSA) and other commonly

administered Assessments evaluated in May 2004. Students scores from seven districts on the PSSA, TerraNova, SAT-9, CAT-5, Northwest Evaluation Association's (NWEA) achievement test, and the New Standards reference Exam (NSRE) from 2001, 2002, 2003 were used in this study. The internal consistency reliability coefficients of the comparison "ranged from 0.93 to 0.94 for math and from 0.92 to 0.94 for reading." (Thacker, Dickinson, Koger, 2004, p. 2). This report stated, "according to traditional reliability statistics, PSSA is a reliable measurement instrument" (Thacker et al., 2004, p. 2).

Validity will be determined by computing convergent validity coefficients. These are measures of the relationship between two separate tests of a student's ability for the same subject matter. When convergent validity coefficients are calculated for the comparison, higher correlations are considered better than lower correlations (Thacker et al., 2004). The results from this study determined that "the correlation between PSSA mathematics and TerraNova mathematics ranged from 0.69 to 0.83. PSSA reading and TerraNova reading correlation coefficients were similar ranging from 0.59 to 0.76" (Thacker et al., 2004, p. 35). The data indicated that the TerraNova reading scores correlated slightly higher with the PSSA reading, while the mathematics correlations were stronger than the reading correlations.

This study of the comparisons of five tests from seven school districts found that, "all tests highly correlated with PSSA subject correlations were highest for mathematics ranging from 0.7 to 0.9, reading correlations were weaker ranging from 0.6 to 0.8. These coefficients provide strong evidence for the convergent validity of the PSSA" (Thacker et al., 2004, p. 160).

The TerraNova, The Second Edition, published by CTB/McGraw-Hill (1996), provides criterion-referenced, norm-referenced, and objectives mastery information. Objectives mastery information can be used to assess students' strengths and weaknesses through its diagnostic information on specific content criteria. This assessment was nationally normed in 1996 providing districts with the ability to compare student achievement with other students nationally. The Human Resources Research Organization (HumRRO) reported a strong relationship between student performance in mathematics and reading on both PSSA and TerraNova assessments.

The Standford Achievement Test 9th Edition (SAT-9), published by Harcourt Brace (1996), is a norm-reference standardized test utilizing current curricular trends in order to accurately measure student progress. The SAT-9 was normed in 1995. Reading passages included in the SAT-9 are written by published children's authors (Harcourt Brace, 1996, p. 10). Comprehension passages represent three types of material including: recreational, textual, and functional. "Research shows that good readers select and adjust strategies according to the purpose for reading and the type of text being read." (Harcourt Brace, 1996, p. 10). The math questions assess the students' "mathematical power" (Harcourt Brace, 1996, p. 12). Students are assessed on their knowledge of mathematical concepts within the context of realistic problems, which require logical reasoning. Revisions for the SAT-9 are used to update the content in order to align with current curricula trends and update norms. Criterion-referenced assessments allow districts to compare student achievement with specific levels of performance. By updating to align to current curricular trends, correlations should be high. Measuring the validity of the SAT-9 was the topic of analysis in the Assessment committee's Analysis of Reading

Assessment Measures. Criterion related validity on the SAT-9 ranged from coefficients 0.71 or 0.97.

Analysis and Design

The researcher will study the effect a multi-year, looping educational design has on students attending two South Central Pennsylvania Schools from 1998-1999 to 2004-2005 academic years. A control group (non-looping students) design will be used to compare the academic achievement of students participating in the looping and non-looping educational designs. Students took either the SAT 9 or TerraNova as a base score in their third grade year (1998-1999). The same students' fifth and eighth grade PSSA scaled scores for reading and math will be analyzed. The results will be used to determine what affect a multi-year educational design has on students' academic achievement, retention, and special education placement. Dependent variables will include gender, socio-economic status, retention rates, and academic progress in math and reading, and special education placement. Ex post facto scaled scores in reading and math will be retrieved from each districts' archive, housed in the CDS database. Ex post facto research uses scores from a database to study and analyze causes after they have caused changes on another variable. This design does not directly test causation, but the information should provide data which should support or refute causal effects.

Scores will be compared through the causal-comparative method in order to determine possible cause-and-effect relationships between variables. A statistical significance at the $p \leq .05$ level of significance will be used to determine the impact a multi-year educational design has on the academic achievement, retention rates, and learning support placements of looped and non-looped students. This statistical

technique will be used to test the nine null hypotheses. Null hypotheses H_{01}, H_{02}, H_{03}, H_{04}, H_{05}, H_{06}, and H_{07} will use the archived scaled score reading and math data, while H_{08} and H_{09} will use historical data to determine the level of significance. Data for this study will be collected from a total of one hundred sixteen students, sixty looping and fifty-six non-looping. Standardized test scores from students' third, fifth, and eighth grade school years will be used for the analysis. Historical data pertaining to retention and special education placement will be compiled from student records. The data collected will be analyzed to test the Null Hypotheses.

Time line

January--- Overview meeting.

February—IRB approval.

March/April---- Collect and analyze data.

May/ June------Write report

CHAPTER IV

ANALYSIS OF DATA

This chapter presents the results of the data analysis for this study. Looping and Non-Looping independent variables were studied to determine their effects on the dependent variables of academic achievement (Math and Reading), gender, retention, special education placements, and social economic status. Student's scale scores in math and reading were analyzed in grades three, five and eight. TerraNova scale scores were analyzed in grade three and PSSA scale scores in grades five and eight. As stated earlier, the Human Resources Research Organization (HumRRO) reported a strong relationship between student performance in mathematics and reading on both PSSA and TerraNova assessments. The following table lists the correlations of the TerraNova and PSSA tests. Table 1 illustrates the statistical correlations criterion, as per Pearson Correlations.

Table 1

Pearson correlations for TerraNova and PSSA

		TN4Math	TN4Read	PSSA5M	PSSA5R	PSSA8M	PSSA8R
TN4Math	Pearson Correlation	1	.714(**)	.690(**)	.477(**)	.658(**)	.578(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	112	111	111	110	110	110
TN4Read	Pearson Correlation	.714(**)	1	.534(**)	.481(**)	.478(**)	.505(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	111	111	110	109	109	109
PSSA5M	Pearson Correlation	.690(**)	.534(**)	1	.769(**)	.854(**)	.773(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	111	110	114	113	111	111
PSSA5R	Pearson Correlation	.477(**)	.481(**)	.769(**)	1	.673(**)	.774(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	110	109	113	113	110	110
PSSA8M	Pearson Correlation	.658(**)	.478(**)	.854(**)	.673(**)	1	.799(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	110	109	111	110	112	112
PSSA8R	Pearson Correlation	.578(**)	.505(**)	.773(**)	.774(**)	.799(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	110	109	111	110	112	112

Note. Correlation is significant at the 0.01 level (2-tailed).

The results of this study will either accept or reject the nine hypotheses.

Research questions were answered and the hypothesis were tested utilizing regression analysis, independent t-test, and comparing math and reading scale scores for grades three, five, and eight. Nine hypotheses were tested for this study:

H_1: There will be a statistically significant increase in reading scaled scores of male students involved in looping as compared with the reading scaled scores of non-looping male students at the $p \leq .05$ level of significance.

H_2: There will be a statistically significant increase in reading scaled scores of female students involved in looping as compared with the reading scaled scores of non-looping female students at the $p \leq .05$ level of significance.

H_3: There will be a statistically significant increase in math scaled scores of male students involved in looping as compared with the math scaled scores of non-looping male students at the $p \leq .05$ level of significance.

H_4: There will be a statistically significant increase in math scaled scores of female students involved in looping as compared with the math scaled scores of non-looping female students at the $p \leq .05$ level of significance.

H_5: There will be a statistically significant increase in math scaled scores of socio-economic disadvantaged students involved in looping as compared with the math scaled scores of non-looping socio-economic disadvantaged students at the $p \leq .05$ level of significance.

H_6: There will be a statistically significant increase in reading scaled scores of socio-economic disadvantaged students involved in looping as compared with the reading scaled scores of non-looping socio-economic disadvantaged students at the $p \leq .05$ level of significance.

H_7: There will be a statistically significant increase in academic progress of those students involved in looping as compared with non-looping students as compared by the PSSA completed in grade 5 and 8 at the $p \leq .05$ level of significance.

H_8: There will be a statistically significant reduction of retention rates of those students involved in looping as compared with non-looping students measured by retention rate data at the $p \leq .05$ level of significance.

H_9: There will be a statistically significant decrease in the number of special education placements of those students involved in looping as compared to non-looping students measured by special education placements at the $p \leq .05$ level of significance.

The results of tests for the nine hypotheses are summarized in this chapter.

Descriptive Statistics

A total of 116 students comprised the population of the study. The sample represented 60 looping students and 56 non-looping. Table 2 describes the population of this study, comparing students in either a looping or non-looping educational design. Students in the looping design represented 51.7% of the population.

Table 2

Looping vs. Non-looping students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	L	60	51.7	51.7	51.7
	NL	56	48.3	48.3	100.0
	Total	116	100.0	100.0	

Frequency of Dependent Variables

The dependent variables of Gender, Socio-economic status and Special Education placement are described in the following tables. Table 3 describes the frequency of male vs. females in the study. The table illustrates that 45.7% of the population were females.

Table 3

Gender comparison of population

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	53	45.7	45.7	45.7
	M	63	54.3	54.3	100.0
	Total	116	100.0	100.0	

The socio-economic status of the population is described in table 4. Out of 116 students in the population, 16 were socio-economic disadvantaged. This represented

13.8% of the population. A valid percent of 86.2 represented the non-socio-economic disadvantaged. Table 4 illustrates this comparison.

Table 4

Socio-economically disadvantaged vs. non-socio-economically disadvantaged

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	100	86.2	86.2	86.2
	Y	16	13.8	13.8	100.0
	Total	116	100.0	100.0	

Students, which made up the sample who qualified for special education, included 13 students out of 116, representing 11.2% of the population. Conversely, 103 or 88.8% of the population were not placed in special education during the study. This was 88.8% cumulative percent of the study.

Table 5

Special Education vs. non-special education placement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	103	88.8	88.8	88.8
	Y	13	11.2	11.2	100.0
	Total	116	100.0	100.0	

Tables 6 and 7 reiterate the H_{01}, H_{02}, H_{03}, and H_{04} reflecting the comparison of scaled scores of males and females in both looping and non-looping designs for math and reading as stated in:

H_{01}: There will be no statistically significant increase in reading scaled scores of male students involved in looping as compared with the reading scaled scores of non-looping male students at the $p \leq .05$ level of significance.

H_{02}: There will be no statistically significant increase in reading scaled scores of female students involved in looping as compared with the reading scaled scores of non-looping female students at the $p \leq .05$ level of significance.

H_{03}: There will be no statistically significant increase in math scaled scores of male students involved in looping as compared with the math scaled scores of non-looping male students at the $p \leq .05$ level of significance.

H_{04}: There will be no statistically significant increase in math scaled scores of female students involved in looping as compared with the math scaled scores of non-looping female students at the $p \leq .05$ level of significance.

In grade 3, the terms TN3Math is abbreviated for TerraNova grade 3 Math, and TN3Read is abbreviated for TerraNova grade 3 reading. Grade 5 and 8 terms are abbreviated as follows:

PSSA5M, Pennsylvania System of School Assessment grade 5 Math

PSSA5R, Pennsylvania System of School Assessment grade 5 Reading

PSSA8M, Pennsylvania System of School Assessment grade 8 Math

PSSA8R, Pennsylvania System of School Assessment grade 8 Reading

Table 6

Math and Reading Scale Score comparison for male (M) and female (F)

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
TN3Math	M	60	633.62	37.295	4.815
	F	52	632.29	35.993	4.991
TN3Read	M	59	655.80	40.624	5.289
	F	52	662.54	40.392	5.601
PSSA5M	M	62	1333.79	203.442	25.837
	F	52	1332.40	180.156	24.983
PSSA5R	M	62	1301.61	210.714	26.761
	F	51	1334.47	142.414	19.942
PSSA8M	M	61	1415.31	218.431	27.967
	F	51	1403.25	175.832	24.621
PSSA8R	M	61	1377.39	257.750	33.002
	F	51	1428.76	209.810	29.379

Table 6 depicts the difference in mean scores between male and female, scaled scores for reading and math. Males outscored females on math tests at each level: TN3math +1.33, PSSA5math +1.39, PSSA8math +12.06, while females in each grade level outscored males in reading. Female scaled score differences indicated in table 6:TN3R +6.74, PSSA5R +32.86, and PSSA8R +51.37.

Table 7 examines the scaled scores for both gender, Looping and Non-looping, math and reading and shows the Mean, Median, Mode, Minimum, Maximum and Standard Deviation. Female looping students scored higher than their counter parts in the non-looping educational design. Looping females in grade three had mean scores of 11 points higher, 51 points higher in grade five, and 74 points higher on the Math tests. Looping males continued the same pattern for math. Looping males in grade three had mean scores 3 points higher, 89 points higher in grade five and 92 points higher in grade eight.

The same pattern continued in reading. Female looping students' mean scores in grade three were 15 points higher, grade five means 16 points lower, and grade eight means were 112 points higher. Male looping students' mean scores in grade three were 3 points higher than non-looping males. Grade five looping students' mean scores were 92 points higher and students in grade eight scored 121 points higher than their counter parts in the non-looping educational design. Even with the elevated scores, the scores are not statistically significant as evidenced in table 7.

Table 7

Male, Female, looping, and non-looping math and reading scores comparison

Variable	Mean	Median	Mode	Stand. Dev.	Min.	Max.
Female Non-Looping TN3M	627	619	612	35.852	572	694
Female Non-Looping TN3R	655	652	621	34.712	607	772
Female Non-Looping PSSA5M	1307	1327	1424	158.95	1032	1608
Female Non-Looping PSSA5R	1343	1343	1363	129.44	1172	1627
Female Non-Looping PSSA8M	1366	1368	1514	172.738	1022	1667
Female Non-Looping PSSA8R	1372	1369	1518	191.43	1022	1740
Female Looping TN3M	638	638	617	35.947	547	740
Female Looping TN3R	670	659.5	652	44.87	564	780
Female Looping PSSA5M	1358	1386	1386	198.87	997	1726
Female Looping PSSA5R	1327	1325	1325	156.02	1025	1590
Female Looping PSSA8M	1440	1466	1514	174.36	1034	1758
Female Looping PSSA8R	1484	1471	1598	215.647	948	2078
Male Non-Looping TN3M	631	635	639	40.34	542	734
Male Non-Looping TN3R	654	649	664	43.331	579	780
Male Non-Looping PSSA5M	1287	1305	1362	220.35	906	1769
Male Non-Looping PSSA5R	1256	1288	1288	225.27	776	1590
Male Non-Looping PSSA8M	1367	1327	1259	245.22	969	1845
Male Non-Looping PSSA8R	1318	1351	1333	271.51	750	1839
Male Looping TN3M	634	637	632	35.58	555	714
Male Looping TN3R	657	651.5	654	40.33	584	780
Male Looping PSSA5M	1376	1369	1566	176.07	934	1726
Male Looping PSSA5R	1348	1363	1527	178.60	1008	1717
Male Looping PSSA8M	1459	1472	1580	185.81	1079	1903
Male Looping PSSA8R	1439	1471	1543	219.82	1007	1839

Table 8

Gender Independent Samples Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TN3Math	Equal variances assumed	.018	.893	.191	110	.849	1.328	6.953	-12.451	15.107
	Equal variances not assumed			.192	108.708	.848	1.328	6.935	-12.417	15.074
TN3Read	Equal variances assumed	.725	.396	-.875	109	.384	-6.742	7.707	-22.016	8.532
	Equal variances not assumed			-.875	107.406	.383	-6.742	7.704	-22.013	8.529
PSSA5M	Equal variances assumed	.083	.774	.038	112	.970	1.386	36.327	-70.591	73.364
	Equal variances not assumed			.039	111.651	.969	1.386	35.940	-69.827	72.600
PSSA5R	Equal variances assumed	5.513	.021	-.949	111	.345	-32.858	34.619	-101.457	35.742
	Equal variances not assumed			-.985	107.221	.327	-32.858	33.374	-99.016	33.301
PSSA8M	Equal variances assumed	2.636	.107	.317	110	.752	12.057	37.985	-63.221	87.334
	Equal variances not assumed			.324	109.858	.747	12.057	37.261	-61.787	85.900
PSSA8R	Equal variances assumed	1.385	.242	-1.142	110	.256	-51.371	44.999	-140.550	37.807
	Equal variances not assumed			-1.163	109.932	.247	-51.371	44.184	-138.935	36.192

The t values indicated in Table 8 are: TN3Math, (.191), TN3Read, (-.875), PSSA5M, (.038), PSSA5R, (-.949), PSSA8M, (.317), and PSSA8R, (-1.142), only the p value for PSSA5R was statistically significant (p=.021). Therefore the Null Hypothesis H_{01}, H_{02}, H_{03}, and H_{04} are accepted.

Tables 9 and 10 show data comparing the socio-economic status of students in looping and non-looping designs. The data reflects no statistically significance. Therefore, the Null Hypothesis, H_{05} and H_{06} are accepted.

Table 9

Scaled Scores in math and reading for socio-economic status of students

Group Statistics

	Econ	N	Mean	Std. Deviation	Std. Error Mean
TN3Math	Y	14	610.21	33.227	8.880
	N	98	636.26	35.973	3.634
TN3Read	Y	14	637.79	20.878	5.580
	N	97	662.01	41.750	4.239
PSSA5M	Y	16	1214.88	186.343	46.586
	N	98	1352.47	187.187	18.909
PSSA5R	Y	16	1237.06	209.402	52.350
	N	97	1329.54	176.113	17.882
PSSA8M	Y	16	1303.88	200.103	50.026
	N	96	1427.48	194.732	19.875
PSSA8R	Y	16	1272.63	297.662	74.416
	N	96	1422.15	220.640	22.519

Table 10

Group socio-economic Independent Samples Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TN3Math	Equal variances assumed	.055	.815	-2.556	110	.012	-26.041	10.188	-46.232	-5.850
	Equal variances not assumed			-2.714	17.652	.014	-26.041	9.595	-46.228	-5.854
TN3Read	Equal variances assumed	4.080	.046	-2.127	109	.036	-24.225	11.390	-46.799	-1.650
	Equal variances not assumed			-3.457	30.942	.002	-24.225	7.007	-38.517	-9.932
PSSA5M	Equal variances assumed	.013	.911	-2.728	112	.007	-137.594	50.442	-237.539	-37.650
	Equal variances not assumed			-2.737	20.264	.013	-137.594	50.277	-242.383	-32.806
PSSA5R	Equal variances assumed	.088	.767	-1.894	111	.061	-92.474	48.831	-189.236	4.289
	Equal variances not assumed			-1.672	18.665	.111	-92.474	55.320	-208.401	23.454
PSSA8M	Equal variances assumed	.014	.905	-2.342	110	.021	-123.604	52.784	-228.209	-18.999
	Equal variances not assumed			-2.296	20.030	.033	-123.604	53.829	-235.879	-11.329
PSSA8R	Equal variances assumed	2.566	.112	-2.380	110	.019	-149.521	62.822	-274.020	-25.021
	Equal variances not assumed			-1.923	17.849	.071	-149.521	77.748	-312.963	13.921

The t values indicated in Table 10 show the math and reading scaled scores and socio-economic status of students. These values are TN3Math, (-2.556), TN3Read, (-2.127), PSSA5M, (-2.127), PSSA5R, (-1.894), PSSA8M, (-2.342), and PSSA8R, (-2.380), only the p value for TN3R was found to be statistically significant (p=.046). Therefore the Null Hypothesis H_{05}: There will be no statistically significant increase in math scaled scores of socio-economic disadvantaged students involved in looping as compared with the math scaled scores of non-looping socio-economic disadvantaged students at the $p \leq .05$ level of significance. The Null Hypothesis H_{06} is accepted.

Table 11 illustrates the looping and non-looping samples of the population. Students who looped during grade three included 53 students, and 59 non-looping students. Grade three scale scores came from the TerraNova. PSSA scale scores were used in grade five and grade eight. The student sample groups in grade five included N= 59 looping, 55 non-looping (PSSA5M), and N= 59 looping, 54 non-looping (PSSA5R). The sample for grade eight included N=60 looping (PSSA8R&M) and 52 non-looping (PSSA8R&M). The group statistics for looping and non-looping students also includes the Mean, Standard Deviation and Standard Error Mean.

Table 11

Group Statistics for TerraNova and PSSA Math and Reading Scale Scores

Group Statistics

	Looping	N	Mean	Std. Deviation	Std. Error Mean
TN3Math	L	59	635.44	35.516	4.624
	NL	53	630.28	37.795	5.192
TN3Read	L	58	662.91	42.510	5.582
	NL	53	654.62	38.048	5.226
PSSA5M	L	59	1361.31	190.629	24.818
	NL	55	1302.96	191.266	25.790
PSSA5R	L	59	1329.63	179.077	23.314
	NL	54	1302.04	187.901	25.570
PSSA8M	L	60	1443.08	187.490	24.205
	NL	52	1371.44	207.489	28.774
PSSA8R	L	60	1446.18	236.044	30.473
	NL	52	1348.40	230.379	31.948

Tables 11 and 12 reflect the group statistics for Ho7 reflecting the academics for math and Reading as stated in H_{07}: There will be no statistically significant increase in academic progress of those students involved in looping as compared with non-looping students as compared by the PSSA completed in grade 5 and 8 at the $p \leq .05$ level of significance.

Table 12

Independent Samples Tests for looping and non-looping students in Math and Reading

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TN3Math	Equal variances assumed	.503	.480	.744	110	.458	5.158	6.929	-8.574	18.889
	Equal variances not assumed			.742	106.907	.460	5.158	6.952	-8.624	18.940
TN3Read	Equal variances assumed	.328	.568	1.079	109	.283	8.291	7.685	-6.940	23.523
	Equal variances not assumed			1.084	108.957	.281	8.291	7.647	-6.864	23.446
PSSA5M	Equal variances assumed	.223	.638	1.630	112	.106	58.341	35.788	-12.567	129.250
	Equal variances not assumed			1.630	111.387	.106	58.341	35.792	-12.580	129.263
PSSA5R	Equal variances assumed	.004	.950	.799	111	.426	27.590	34.529	-40.831	96.011
	Equal variances not assumed			.797	108.946	.427	27.590	34.603	-40.992	96.172
PSSA8M	Equal variances assumed	.807	.371	1.919	110	.058	71.641	37.328	-2.334	145.616
	Equal variances not assumed			1.905	103.791	.060	71.641	37.600	-2.924	146.206
PSSA8R	Equal variances assumed	.004	.948	2.211	110	.029	97.779	44.228	10.130	185.429
	Equal variances not assumed			2.215	108.432	.029	97.779	44.151	10.269	185.290

The t values indicated in Table 12 shows TN3Math at (.744), TN3R at (1.079), PSSA5M at (1.630), PSSA5R at (.799), PSSA8M at (1.919), and PSSA8R at (2.211). None of the p values were found to be statistically significant. Therefore, the Null Hypothesis H_{07} is accepted.

Tables 13 and 14 indicate the academic progress of both special education and non-special education students. Table 13 compares the Means of students in grade three, five, and eight in math and reading. Students placed in Special Education are as follows: Grade three N=10, Grade five N=13, and Grade eight N=11. A further break down of students identified for Special Education by the fifth grade include eight students enrolled in the looping program and five students enrolled in the non-looping program. The term

Special Education is abbreviated SpEd and students are designated as either Y (yes) or N (no) as placed in Special Education.

Table 13

Group Statistics for Special Education placed students and non-placed students

Group Statistics

	SpEd	N	Mean	Std. Deviation	Std. Error Mean
TN3Math	Y	10	598.80	40.174	12.704
	N	102	636.35	34.586	3.425
TN3Read	Y	10	624.60	31.994	10.117
	N	101	662.36	39.749	3.955
PSSA5M	Y	13	1085.77	141.962	39.373
	N	101	1365.00	174.361	17.350
PSSA5R	Y	13	1061.46	181.305	50.285
	N	100	1349.59	155.803	15.580
PSSA8M	Y	11	1144.36	188.762	56.914
	N	101	1438.73	178.794	17.791
PSSA8R	Y	11	1030.55	233.614	70.437
	N	101	1441.11	201.062	20.006

Table 14 looks at the comparison of special education placements.

Table 14

Special Education Placement Comparison

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TN3Math	Equal variances assumed	.688	.409	-3.231	110	.002	-37.553	11.623	-60.587	-14.518
	Equal variances not assumed			-2.854	10.351	.017	-37.553	13.158	-66.736	-8.370
TN3Read	Equal variances assumed	.293	.589	-2.908	109	.004	-37.756	12.984	-63.491	-12.022
	Equal variances not assumed			-3.476	11.936	.005	-37.756	10.863	-61.439	-14.074
PSSA5M	Equal variances assumed	.426	.515	-5.536	112	.000	-279.231	50.441	-379.173	-179.289
	Equal variances not assumed			-6.490	17.035	.000	-279.231	43.026	-369.994	-188.468
PSSA5R	Equal variances assumed	.915	.341	-6.156	111	.000	-288.128	46.806	-380.878	-195.379
	Equal variances not assumed			-5.473	14.399	.000	-288.128	52.643	-400.745	-175.512
PSSA8M	Equal variances assumed	.018	.892	-5.159	110	.000	-294.369	57.063	-407.455	-181.283
	Equal variances not assumed			-4.937	12.038	.000	-294.369	59.630	-424.245	-164.493
PSSA8R	Equal variances assumed	.449	.504	-6.331	110	.000	-410.563	64.846	-539.073	-282.054
	Equal variances not assumed			-5.607	11.671	.000	-410.563	73.223	-570.603	-250.523

The t values for special education students are TN3M, (-3.231), TN3R, (-2.908), PSSA5M, (-5.536), PSSA5R, (-6.156), PSSA8M, (-5.159), and PSSA8R, (-6.331). Levene's Test for Equality of Variances indicates that the p value for each of the three grade levels, are not statistically significant. Therefore the Null Hypothesis H_{09}: There will be no statistically significant decrease in the number of special education placements of those students involved in looping as compared to non-looping students measured by special education placements at the $p \leq .05$ level of significance is accepted.

In summary, the Null Hypothesis 1, 2, 3, 4, 5, 6, 7, 8, 9 are accepted based on t-tests and correlation manipulation. Results of this study have indicated that there is no statistical significant academic difference between students who participated in either a looping or non-looping educational design.

CHAPTER V

DISCUSSION

Introduction

Chapter five includes the determination of acceptance or rejection of the null hypothesis, draws conclusions from those acceptances and rejections, discusses both implications for further research as a result of this study and a final analysis of the complete study.

Educators are constantly searching for more effective methods to educate our communities' youth. Several years ago, the researcher discovered a multi-year educational design, looping. Working towards an effective method, a question arose; is looping educationally beneficial. Parent meetings are held each spring, with parents lining up to sign the list. With all the positive feedback, it was thought that the answer to the question was yes: looping is beneficial.

The purpose of this study was to evaluate various aspects of the process of looping in elementary schools. Those would include the comparison of academic achievement in math and reading, retention rates, gender, special education placements as compared with students following a single year design. The null hypothesis generated from this design indicated that there would be no statistically significant change in math and reading achievement, retention rates, gender and special education placements as a result of the application of looping as opposed to those students not associated with the looping process. The results of the study as indicated in Chapter Four show that all null hypotheses related to the looping versus non-looping process were accepted. Therefore, it was found that there was no statistically significant increase in reading, in mathematics,

males versus females, socio-economic advantage versus advantaged students and in comparison with The Pennsylvania State School Achievement Tests scores (PSSA). All were associated at the $p = 2$ or $p \leq 0.5$ level of significance. No hypothesis reached that specific level. One hundred sixteen students were studied for this study.

Statement of the Problem

Educators' tasks are to find methods, which will deliver the best possible education for each student in their communities. The methods used or sought are based on the communities or determined on a local level. Policies and/or studies developed by both Federal and State governments, such as *A Nation At Risk* (1983), and *No Child Left Behind* (NCLB) (2001), have challenged educators to examine ways to improve instruction within their communities. A multi-year design, such as looping, is an educational design, which may help school districts meet these challenges issued by the Federal and State governments.

Conclusions

As indicated from Chapter Four tables and charts, the data from this study found that the looping educational design had no statistically significant difference on any of the dependent variables tested. One core relationship developed in this type of program showed a positive effect on students. Students outscored their counterparts in the traditional classes. This could indicate that long-term relationships developed in looping classes. The parents were regular visitors to the classrooms involved in the looping process as part of the educational family. Teachers and parents participated in activities to allow for this relationship to continue toexist. It was this researcher's hypothesis that

looping participants would take advantage of these types of relationships over an extended period of time. The analysis of data concluded otherwise. There was however some indications of strengths for the looping process which did not reach statistical significance. They included the reduction in special education placements as one of the benefits of the looping educational design. However, the study did not provide evidence that special education placements were statistically significantly reduced. All conclusions reached as a result of this study are that although the looping educational design showed some additional satisfaction and preparation on the part of various students with varied abilities, there was no significance between the two designs based on the design of this particular study.

Educational Implication

Given the overwhelming results for this study, it would imply that the researcher's initial question of increase in academic standards of students in a looping process were not supported by the data. The implications for this study may indicate that other variables besides that of an academic nature are significant. It would seem that studies dealing with looping versus non-looping for relationship purposes or better tracking for specific pedagogies would warrant further study. The literature implied that the academic nature of the students would be similar and this study proved that particular point. It did not however, indicate a specific study for such areas such as special education placement, socio-economic backgrounds, or family structures. Future studies are needed in these particular areas. Educational designs are adapted to meet the educational needs of every community. Educators continuously adapt the educational designs used in their communities according to the actual vision and needs of their

community. This looping educational design is but one of many adaptations to accommodate the needs of the single school or the entire district.

Recommendations For Future Study

The researcher would recommend looking more intensely at the long-term effect of looping as it pertains to academic achievement. Math and reading scores were compared as the students progressed through a seven-year period. More study of the long-term relationships and how they affect academic achievement is warranted in order to determine how relationships developed in a looping design help the academic achievement of students.

Data from this study detailed the scores and how looping students outscored their counterparts in the traditional single year design, but were not statistically significant. It is important for schools, administrators, parents and teachers to know the best way to educate the next generation. Looping may be the answer the education community has been searching for to meet its needs. The concept of looping has been around since the one-room school. Communities need to determine their needs and which design fits. More long-term data is needed to be able to make good decisions.

Additional study is recommended to determine how gender affects the academic achievement in looping students as compared to non-looping students. This study reported no significant differences. However, there was a difference in the data of fifth grade females in reading. Maturity research should be considered to determine how maturity affects academic achievement. Is there a specific time period in which maturity levels are assisted by a looping design?

The gender of students was the only variable with reference to achievement, which tended to show some significance. If gender was studied over longer cycles, an accumulative effect over a number of years may extend to a significant level, based on this study. It is recommended because of the significance, that future studies could look at an extended period of time in order to help determine if gender effects academic achievement to a level of significance.

Further research is recommended "qualitative" in nature, to recognize intrinsic change i.e. Psychological and emotional needs for students involved in looping programs. Because of the nature of this process, these variables may be of specific interest for the selection of this process by school districts.

This study looked at students who looped for two-year cycles. A study focusing on longer cycles to see if the length of the cycle effects the achievement would be valuable. Schools such as Waldorf schools loop as long as eight years. A study to determine if longer cycles produce higher achievement levels than two-year cycles would be beneficial.

Communities and educators are constantly searching for the right educational design. Looping could be the design that best fits a communities needs. It is hoped that this study adds information, which will aide communities in making the best educational decisions for their own needs.

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APPENDIX A
Permission Form

DUQUESNE UNIVERSITY

600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

Permission from School Districts

Joseph M. Snoke
Xxx xxxxxxxxx xx
Xxxx,PA xxxxx
December 1, 2006

Xxxxxx Xxxxxxx
Director of Elementary
Xxxxxxxxxx xxxxxxx
Xxxxx, PA xxxxx

Dear Xxxxxx,

As a student at Duquesne University, I am currently involved in my dissertation phase of the Interdisciplinary Doctoral Program of Educational Leaders. My dissertation will focus on a comparison of the academic achievement of students in looping programs with their peers in the traditional one-year classrooms. Specifically I will be looking to find an answer to the following question. "What difference does a looping design have on academic achievement, special education placements and retention rates of students compared to students enrolled in a traditional single year design?"

I would like your permission to access and utilize non-identifiable scores and information for the students selected for the study. Random numbers will be used to protect the identity of all participants.

In preparation for the study, I will contact the principal at each participating school and arrange for the collection of all necessary data with a minimum of disruption.

I believe the results will be beneficial in evaluating the success of both programs in your district. The results may also be helpful for teachers, administrators and districts that are considering the possibility of implementing a looping design.

Thank you for your cooperation.

Sincerely,

Joseph M. Snoke

Permission is hereby granted to Joseph M. Snoke to access and use academic and historical data for students who have been enrolled in a looping program design and the remaining students at that grade level who have participated in traditional classrooms.

_____ _____

Signature Date