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The Effects of Looping on the Academic Achievement
of Elementary School Students

A dissertation

presented to

the faculty of the Department of Educational Leadership

and Policy Analysis

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor in Education

by

Vada S. Bogart

December 2002

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Keywords: Looping, Long-term groups, Multi-year class,
Persistent groups, Two-year classroom

ABSTRACT

The Effects of Looping on the Academic Achievement of Elementary School Students

by

Vada S. Bogart

The purpose of this study was to compare the academic achievement of students in looping programs from school systems in East Tennessee to their peers in traditional one-year instructional programs. Looping is defined as any program design that perpetuates a cohesive student group with the same teacher for more than one year. The study included all students who had completed fourth grade in 2001 at every school in East Tennessee that implemented a third/fourth grade looping design. Student scores reported for 1999, 2000, and 2001 on the *TerraNova* Standardized Achievement Test were obtained from individual student records. Comparisons were made on the Total Reading, Total Language, Total Math, and Total Battery scores. Differences between program design groups (looping and traditional) on "pre-looping" second grade (1999) scores were assessed using *t*-tests for two independent groups. Two-way Analysis of Covariance (ANCOVA), was used to examine the main effects of program design and student gender on 2000 and 2001 test scores, along with program design x gender interactions, while controlling for prior test score differences.

The findings suggested that students in looping classrooms benefited academically by remaining with the same teacher and classmates for two successive years. Significant main effects were detected for program design in first year comparisons as indicated by significantly higher scores on all four subtests. Scores for those in the looping classrooms remained significantly higher in second year comparisons on each subtest except Total Language even after controlling for third grade (2000) test scores. Significant main effects for gender were detected after the first year of participation in each design. This included significantly higher Total Language and Total Battery scores for female participants. No significant differences by gender were detected when scores were compared on the four subtests at the end of the two-year cycle. A program design x gender interaction was detected at the end of the first year. This interaction showed that female participants in looping classrooms showed higher Total Math achievement. A program design x gender interaction also occurred after the second year where male participants in the looping classrooms obtained higher Total Language scores.

DEDICATION

I dedicate my hours of work to a very special man.

My husband, Glenn, has earned my endless love for his constant support

throughout the doctoral program,

his abiding faith in my ability to complete every task,

and his steadfast love for me as vowed twenty-seven years ago when he pledged his love

through good times and bad.

Glenn, I admire your wisdom, diplomacy, and deep-grounded values.

You possess such rare qualities in fulfilling the roles of a sensitive husband, loving father,

and educational visionary.

You are admired by many, and I am extremely proud of you.

I dedicate my pursuit of worthy goals to my blessed mother and dearly departed father,

Mavis Fritts Stanley and the late Robert Marvin Stanley, Sr.

They reared me by their example and trusted that all their efforts would not be in vain.

My deepest wish is that I have pleased them.

I dedicate my persistence and patience in loving memory of my gracious in-laws,

Hal Bogart and Nora Grace McMahan Bogart.

They enriched my life with their presence.

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I offer you my deep thanks for maintaining high expectations without apology. Your astute remarks were well made and provided valuable commentary on my work. The final product reflects the attempts you made toward a quality project. I am grateful for your many contributions.

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Lara was forever chanting, "Mom, you can do it!" Paul Henry always alerted the tribe when mother was "in the zone." Rachel always assured me that the circumstances were just temporary. Thank you for all your frequently administered hugs and kisses.

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May my words please Him and my witness bear testimony to His greatness.

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CHAPTER 1

INTRODUCTION TO THE STUDY

Horace Mann, while promoting and organizing public schools in America during the 1800s, outlined in his *Fourth Annual Report* (1840) (as cited in Cremin, 1957) the division of children according to ages and attainments, with one teacher having the charge of only a single class. Mann, as Secretary of the Massachusetts Board of Education, had earlier made a pilgrimage to European schools to identify new ideas that could be brought back to this country. The celebrity of institutions in foreign countries had attracted his attention, and he undertook the task of observing and analyzing their best practices to see if they were in any way superior to those of American schools. He searched for inspirations that would ignite the educational community toward excellence. He was mindful of the practicality and financial feasibility of each consideration as well. One of the most important elements in the superiority of Prussian schools, Mann maintained, was the proper classification of students. Their organization of children into classes influenced Mann's suggestion that the placement of children in American schools be determined by age. According to Mann's recommendations, teachers should be obligated to teach for the mandated 10-month period; at the end of which students would be promoted (to the next grade and the next teacher), and teachers would inherit a new group of students (Compayre, 1907; Cremin, 1957; Hinsdale, 1898).

The recommendations of Mann represented a logical and easily managed plan that was almost universally implemented in American schools. Almost 200 years later, schools continue to embrace and incorporate the plan with few questions regarding its applicability to modern circumstances, its alignment with advances in the understanding of child development and individual differences, or how schools choose to segment and compartmentalize learning.

Although the model espoused by Mann may have been appropriate for schools 200 years ago, schools and the communities they serve have become more complex. Problems facing today's schools differ considerably from those on the forefront two centuries ago; yet, schools cling to the long tradition of assigning students to one teacher every 10 months. Does the longevity and staying power of this practice testify to its enduring merits, or is it a clear reflection of the unwillingness of schools to accommodate and instigate change?

One of the most recent challenges to the traditional way schools operate is called "looping" or "long-term grouping." Others may refer to the practice as "persistent groups," the "two-year classroom," or "multi-year programs." Proponents of looping question the practicality and justification for disbanding a group of students (along with leaving their teacher) once a collaborative relationship has been established. In a looping program, a relationship-centered framework is extended over a two-year or longer period. It presents an opportunity that encourages teachers and students to invest in, and perhaps risk, a long-term relationship.

Looping has its enthusiastic supporters, but critics abound as well. There are educators who are inspired by its potential, yet others who question its alleged benefits. Veterans in education are inclined to be skeptical of looping design's broad claims, and they seek concrete evidence of the value that looping may, or may not have for the educational environment. Looping casts the teacher and his or her students in a drama that unfolds over the course of two or three years. It is a break from tradition. It is not a practice to replace tradition; it is an option that appeals to some teachers, students, and parents. Perhaps it is time to examine more closely the premises and speculations being reported by a variety of looping proponents and opponents.

Purpose of the Study

The purpose of this study was to compare the academic achievement of students in looping programs from school systems in East Tennessee to their peers in traditional one-year instructional programs. The scores of students enrolled in 6 looping groups at 4 schools were

compared to those of 16 same-grade peer groups at those same schools enrolled in nonlooping classrooms on a standardized test. The scores reported for all students on the *TerraNova* Standardized Assessment were examined as the primary dependent variable. The study focused on self-contained classes that looped for a third/fourth grade combination and their peers who were in the same schools in a traditional one-year arrangement of self-containment. The study centered on students who had completed the looping cycles and the single-year program designs for fourth grade in the spring of 2001. An additional examination explored the performance levels of females in comparison to males among all groups, as well as a comparison of possible interactions between gender and class design.

Research Questions

The following research questions were formulated to guide the investigation:

1. What is the demographic profile of students in the study?
2. Are there initial differences in the achievement levels of students beginning third-grade looping programs and students beginning third grade in traditional programs for Total Reading, Total Language, Total Math, and Total Battery?
3. Are there significant differences at the end of the first year between students in looping designs and those in traditional designs for Total Reading, Total Language, Total Math, and Total Battery while controlling for prior achievement (initial differences detected in 1999)?
4. Are there significant differences at the end of the two-year period (2001) between students in looping designs and those in single-year designs for Total Reading, Total Language, Total Math, and Total Battery scores while controlling for prior achievement (initial differences in 1999 and differences after the first year in 2000)?
5. Is there a significant difference between males and females for Total Reading, Total Language, Total Math, and Total Battery scores when controlling for prior achievement?

6. Are there significant interactions between gender and program design for Total Reading, Total Language, Total Math, and Total Battery scores while controlling for prior achievement?

Significance of the Study

As an organizational design, looping has recently received more attention in the educational community, but little research is available to support its efficacy. Few formal studies have been conducted that compared the academic achievement of students participating in a looping design with that of their counterparts in traditional one-year classrooms. This study has the potential for providing quantitative information that could be used by the educational community in evaluating one dimension of the effectiveness of the two program designs being compared. Teachers and administrators could benefit from the comparisons made in this study to make better decisions regarding the delivery of instruction in school settings.

Limitations, Delimitations, and Assumptions

The research in this study was delimited to four schools representing four different systems in East Tennessee that implemented a looping design as well as the traditional classroom design within their schools. Random sampling was not possible because of the unavailability of schools that offer multiyear programs.

The study was limited somewhat through the use of cluster sampling. For the purposes of the study, it was more feasible to select groups of individuals rather than individuals from a defined population. Because the study purposed to compare two distinct classroom designs for delivery of instruction, the efficacy and logic of accessing classrooms that typify the two designs seemed appropriate.

It was assumed in this study that *TerraNova* scores reported for all students were accurate and indicative of student achievement. The researcher also assumed that the *TerraNova* was

administered in a setting that was conducive to optimum performance by all students. Environmental factors such as lighting, room temperature, comfortable seating, and room arrangements were assumed to be satisfactory. Incidentals such as test stress, threat of failure, disruptive behaviors, teacher behaviors, and other distractions were assumed to have been minimized throughout the testing procedure.

It was assumed that all teachers participating in the study (looping and traditional) were guided in their instruction by a framework of instructional objectives issued by the State Department of Education. Although methods and materials varied among those teachers, their curriculum goals remained essentially the same and were aligned with the *TerraNova* exam.

The ability to eliminate teacher personality cannot be controlled by most educational research designs; therefore, it was assumed that all teachers in the study were capable, competent, and comparable in skill and ability. A deeper assumption underlying teacher presence was the school climate. It was assumed that all participating schools were safe, comfortable, and provided equitable opportunities for academic success.

Definition of Terms

For the purposes of this study the following definitions were applied:

1. *Academic Achievement*. A measure of progress on a set of tasks as determined by results reported on the *TerraNova* Standardized Achievement Test.
2. *Looping*. Any program design that perpetuates a cohesive student group with the same teacher for more than one year (Grant, Johnson, & Richardson, 1996).
3. *Normal Curve Equivalent Scores* (NCEs). An equal-interval standard score ranging from 1 to 99, with a mean of 50 and a standard deviation of 21.06 (Gall, Borg, & Gall, 1996).
4. *TerraNova*. An assessment system designed to measure concepts, processes, and skills taught throughout the nation using a series of interconnected assessments named the

Comprehensive Tests of Basic Skills (CTBS). It is both norm-referenced and criterion-referenced (CTB/McGraw-Hill, 1996).

Organization of the Study

The study is composed of five chapters. Chapter 1 is the introductory chapter containing the purpose of the study, the research questions that guided the study, the significance of the study, delimitations, limitations, assumptions, and definition of terms. Chapter 2 contains the review of literature related to the study. Chapter 3 includes the research design, the population, the instrumentation, the method of data collection, and the methods of data analysis used in the study. Chapter 4 presents an analysis of the data and treatment of the results. Chapter 5 includes a summary of the findings, conclusions, and recommendations for practice and further study.

CHAPTER 2

REVIEW OF LITERATURE

Looping, as a design alternative to the traditional one-year pairing of a teacher with a group of students, is a variation on persistent or long-term groups. Quite simply, looping is a practice that allows a teacher to remain with the same class for a period of two or more years (Forsten, Grant, Johnson, & Richardson, 1997). It is a growing movement in America, inspired by a number of initiatives that have proposed establishing long-term relationships between teachers and students. One of the first suggestions to inaugurate what amounted to a looping design was posed as a question in a memo issued by the U.S. Department of Education in 1913. It asked:

Shall teachers in graded city 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? (LAB, 1997, p. 4)

Additionally, the memo offered what were considered advantages to such a class structure. The benefits implied by that early recommendation closely parallel the favorable outcomes anticipated by educators who advocate a looping design today (Grant, et al., 1996). Looping can be practiced differently according to the visions, needs, and views of educational communities. Each looping design can be tailored to accommodate the situation within an individual building all the way to implementation by an entire system. Commonly, teachers adopt a two-year design, but a few opt for a three-year design that better suits their particular environment.

The literature on restructuring schools consistently offers support for persisting groups. Throughout the works of researchers and practitioners are recommendations for schools to become communities of learners, with adults and children creating bonds for the purpose of learning (Boyer, 1995; Sergiovanni, 1994).

These persistence groups are often referred to as looping groups or multiyear groups. Even though looping is not the most common design strategy for the delivery of instruction by schools in the United States, it is by no means, a new concept. In contrast to American schools, forms of persistence groups have long been recognized worldwide as effective means of organizing groups for learning. From Japan to Bavaria to Jamaica, educators have expressed the belief that group cohesion stimulates learning (Wynn & Walberg, 1994). These programs are based on the belief that teachers must become knowledgeable about their students before they can facilitate learning. The teaching-learning dynamic can be impacted positively through looping. Because it builds on the concept of establishing a continuum of learning through a long-term relationship, looping can embody a means of successful school reform (Denault, 1999). Proponents maintain that teachers should know their students well and shape class values to form pro-learning environments (Wynn & Walberg).

The concept of looping was proposed as early as 1913 in America, but its practice was not initiated until much later. The beginnings of looping might actually be traced to the Waldorf Schools in Germany. One of the oldest and most touted examples of persistence in group, this German movement held permanence in group as its fundamental pedagogical belief (Barnes, 1980).

Historical Connections

As a predecessor to looping, the Waldorf School's basic design featured a class that maintained the same "class teacher." According to Barnes (1980), Emil Molt, the owner of the Waldorf-Astoria cigarette factory in Stuttgart, Germany, was described as a far-sighted industrialist. Molt theorized that simply changing governments and substituting one political system for another could not heal the breakdown of social and economic life in Germany following World War I. There had to be a change in the people themselves. The need for cultural renewal was evident. Molt suggested a new impulse in education. His vision was to

begin this practical endeavor by first educating the men and women who worked in his factory. Molt turned to an Austrian thinker whose ideas had provided the best answers to his questions. Rudolph Steiner's help was solicited, and he responded by bringing forward his ideas for a renewal of social life. He created a program that began in the Waldorf-Astoria factory. The adult education and apprentice program proved so fruitful that Steiner was recruited to develop a curriculum and methods for a comprehensive program to educate the children of the employees from the factory. Essential to Steiner's plan was a relationship of the students to the class teacher, not to the instructional materials. He insisted that teacher and student accompany each other through the full eight years of elementary instruction. Thus, when the Freie Waldorfschule opened in Stuttgart in September 1919, it was an adventure that paired teachers with students in an extensive relationship as a potent force in valid learning. Teachers who adhered to Steiner's pedagogy made a commitment to children to undertake and sustain deep human relationships (Barnes, 1980; Reinsmith, 1989; Uhrmacher, 1993).

The Waldorf School grew rapidly. It became the largest nondenominational school in Germany, and its popularity spread to Switzerland, Holland, and England. In 1928, the opening of the Rudolph Steiner School in New York City marked the beginning of Waldorf education on the North American continent. As the Nazi government rose to power in 1933, the German Waldorf schools mounted a life-and-death struggle for survival against the harassment of National-Socialist Germany. The new power vehemently opposed a school system that sought to educate individuals to think for themselves. The schools were finally shut down in 1938. After an underground existence for seven years, the schools reopened under the protection of British and American military governments. After the war, schools sprang up in Switzerland, Holland, the Scandinavian countries, Great Britain, France, Italy, Australia, South Africa, New Zealand, and in North and South America as well. The rapid growth of schools caused a shortage of trained and qualified teachers, which prompted the declaration of a moratorium on new schools. As training centers were established around the globe, the school movement could advance once

again. In the United States, there were Teacher Training Centers at Mercy College in Detroit, in Sacramento, and in Los Angeles. Inservice was conducted through several schools, including the Green Meadow School in Spring Valley and the Rudolph Steiner School in New York City (Barnes, 1980).

With the passage of time, school systems in other parts of the world considered the element of teacher-student relationships as vital to the learning process. Modifications were made to accommodate cultural differences in educational philosophies, yet the extended experience with teacher and student remained central to each newly adapted design. Schools in Japan invested in a similar and useful example of an approach to provide continuity in education. The Japanese developed schools in which teachers stayed with students for two years or more. It was believed that students and teachers could capitalize on learning and maximize individual progress through group cohesion. In a country where academic learning was stressed, the looping concept was especially appealing (Sato, 1993).

In China's schools, students were divided into groups at the beginning of their elementary years (1st through 6th grades), their junior high years (7th through 9th grades), and their senior high years (10th through 12th grades). Students remained in the same group with the same classmates for all their years at each level. The teacher played multiple roles, from instructor to counselor to friend. The Chinese proposed that the continuous teaching of the same group of students facilitates the teaching and learning of a subject, helps ease the movement from one grade to another, and makes long-term planning easier and more effective (Liu, 1997).

In the former British colony of Jamaica, elementary schools assigned students to divisions. The design mimicked looping in that each division matched proctor and the same classmates throughout their time in elementary school. Many school activities and competitions were organized and centered on these divisions. The shared belief was that groups stimulated greater learning (Wynn & Walberg, 1994).

More recently, a dedicated educator by the name of Deborah Meier attempted to change

the way schools worked. In 1974, she founded three elementary schools in the New York City School System and was committed to the creation of exciting schools that would, according to her, destroy the stultifying "status quo." Her schools emphasized the life of the mind (much dialogue and discussion) and incorporated as part of the plan classroom assignments in which children stayed with the same teacher for two years. She reasoned that teachers and students had to get to know each other well in order to achieve a certain level of communication for learning. Her idea for a first-class education centered on the two-year classroom (Goldberg, 1991).

Despite its link to other practices in the past, looping has been implemented in such fashion in the United States that it is still regarded as innovative and exceptional (Burke, 1996). Many contemporary educators have expressed a renewed interest in the logic behind multiyear placements of teachers and students. Although teachers direct their classrooms under a variety of philosophical practices, looping teachers are guided by, and generally adhere to, common operating principles (Grant et al., 1996).

Operating Principles

The most common feature of looping obligates a group of students to remain together for more than one year. Some loops are two consecutive years, whereas others may be three or more. Continuity of the group rather than class size is of greatest importance (Forsten et al., 1997; Grant et al., 1996; Wynn & Walberg, 1994). Secondly, the design compels teachers to move with students as they are promoted to the next grade. This rationale immediately stems from the assumption that a teacher who directed the group should, in essence, become a part of the group (Grant et al.). Another major point in the looping design is the need for a balanced classroom. Providing a diverse and manageable classroom population allows teachers to optimize learning that occurs between students in any classroom, and the need expands in a multiyear environment. Looping classrooms should not become dumping grounds for high needs students. Likewise, they should not become enrichment programs for the elite or gifted.

The multiyear classroom should represent and reflect the diversity of each school's population (Anonymous, 1998; Forsten, Grant, & Richardson, 1999; Grant et al.). A fourth factor that characterizes looping classrooms is the need for teachers and students to form a learning community where all members contribute and serve to foster small group life. Much time is invested in getting to know each other and appreciating the diversity of learning styles (Wynn & Walberg). Another consideration that consistently appears in successful looping configurations is adequate teacher preparation. Best results in looping programs stem from organizations where teachers have received a thorough overview of the plan and are afforded the time and resources to expand the curriculum. Proponents of looping argue that simply equipping teachers with basic knowledge is inadequate. Teachers, parents, and administrators need to form study groups to discuss research in looping, reflect on the practice, and develop a strategic plan for implementation (Chirichello & Chirichello, 2001; Grant et al.). The decision to loop is ultimately relegated to the teacher. Compliance is not the goal in looping, commitment is (Forsten et al., 1999). The teacher is the pivotal point in looping. The administration should listen as teachers voice their needs and concerns (Forsten et al., 1997). Finally, no evidence exists to suggest any particular merit associated with the number of years a loop persists. There is no single way to implement looping; there are wide differences of opinion. In Waldorf schools, students are together from first through eighth grades. It is an option some parents choose for their children, but most parents prefer a two-or-three-year design. A number of parents and educators have suggested that children benefit from exposure to the talents and viewpoints of a wider variety of teachers than the Waldorf schools offer. They also expressed concerns that their children may miss out on new friendships if they remain with the same classmates for an extensive period beyond two or three years (Forsten et al., 1997). The period of time teachers and students are together should be determined by school personnel and based on the mutual views of all stakeholders (Forsten et al., 1999).

Advantages Associated with Looping Classrooms

With the aforementioned principles to govern the basic design for looping, practitioners in looping have chronicled their experiences and researchers have conducted a limited number of studies that report the beneficial characteristics looping classrooms seem to share. Looping enthusiasts make rather broad claims when discussing the favorable effects of looping. Many of their assertions are unsubstantiated, but limited research and the experience of practicing teachers have identified specific factors that are commonly discussed benefits associated with looping designs. The first year in looping is much like that of the year in a traditional one-year classroom. Teachers contend that most of the benefits of looping come in the second year. Among the most frequently mentioned factors are (a) the relationships that develop over the years, (b) the use of time, (c) the possibility of increased academic achievement, (d) the development of a cohesive curriculum, and (e) the stability offered by the program design (Anonymous, 1998).

Relationships

A variety of productive human groups are characteristically stable and persistent. A healthy family life, profitable corporate efforts, winning sports teams, effective military operations, and successful religious organizations all depend, to varying degrees, on the quality, stability, and duration of the relationships among and between its members (Homans, 1950). By contrast, less value has been placed on long-term interpersonal relationships in American schools (Rosenholtz, 1989; Slavin, 1989). George and Shewey (1997) noted that contemporary learning groups in the American educational system have the common design attribute of brief existence. Traditional classrooms have a relatively short life span. Wynn and Walberg (1994) viewed the lack of persistence in-group in American schools as a design fault. They wrote:

Unfortunately, the effectiveness of learning in groups in American schools is often tempered by a common design flaw: usually each group has only a short life span, so its members have comparatively brief group relationships with one another. . . . Essentially,

American educators and researchers involved in designing groups give little weight to group persistence as a value for stimulating learning. (p. 527)

It has been suggested by some educators that learning can be enhanced when teachers and students are members of classrooms that last for more than 36 weeks. These educators reasoned that long-term relationships might add significantly to the quality and effectiveness of education as a whole. Improvements in student achievement, personal development, and group citizenship should become evident when pursued within the context of long-term teacher-student relationships (George & Alexander, 1993). Chaskin and Rauner (1995), Shore (1996), and Testerman (1996) also saw relationships as the foundation for academic learning.

“At the heart of a successful looping classroom are the continuity of relationships and the learning environment” (Forsten et al., 1997, p. 13). Consistently, looping teachers have reported that an extended period with children allows for greater relationship-building opportunities than the regular classroom. From her experience as a multiyear teacher in the People’s Republic of China, Liu (1997) promoted the importance of the relationships between teachers and students as being crucial to students’ academic and psychological development. She asserted that the longer such relationships last, the better chance they have of exerting a positive influence.

Oxley (1994) reported that at Koln-Holweide, a German comprehensive school, “Teachers believe that a close, stable relationship between teachers and students is a necessary condition for effective education” (p. 523). Students at the school were grouped with the same teachers for six years. In core subject classes, students belonged to the same “table group” in which members worked together. Students were assigned to these heterogeneous groups in terms of gender, ethnicity, and ability. Members were expected to help one another and contribute to everyone’s mastery of the material. The overall design has been associated with greater teacher knowledge of students and a sense of community among students.

Vermont educators Mazzuchi and Brooks (1992) maintained that the teacher/student relationship had moved them toward a constructivist, child-centered philosophy. Out of their long-term relationships with students came more reflection on students than instructional

objectives. Newberg (1995) affirmed that looping, indeed, changed the focus of teachers. Looping asked teachers to make a “radical shift” from grade identification as their center of attention to taking a longer view of the students they taught. In Newberg’s words:

When students move annually from one teacher to the next, each teacher sees only a set of snapshots of student performance, but teachers who work with the same students for several years participate in the feature-length film of the students’ lives as learners. (p. 715)

Multiyear designs require a deeper investment in children’s development. Time together permits a relationship between teacher and students that unveils the complete person (Marzano, 1992). With parents dividing their time between demanding job schedules, after-school activities, and quality home life, many children lack continuity in their lives. For many students, the traditional school mirrors insecure environments by annually interrupting relationships that have been established among teachers, students, and parents (Hampton, Mumford, & Bond, 1997). By contrast, the looping design provides children and their parents the opportunity to spend more time with a personality at school who is already familiar. A healthy cohesion between teacher/student, student/student, and teacher/parent cannot be developed without group persistence (Wynn & Walberg, 1994).

Newberg (1995) used the analogy of looping and running a race to illustrate his point. He described the situation by saying that teachers in traditional classrooms meet new groups of students annually and work with them according to schedule. The following year, they pass the baton to the next runner (teacher). They do not run the full race. The dismantling of classes after just one year seemed to minimize the importance of the teacher/student relationship. He presumed all classes within a school had been formed after giving much careful consideration to the combination and composition of students. He considered this balance among abilities and personalities as a way to optimize learning. Under the long-term system espoused by Grant and his colleagues (1996), parents, teachers, and children remained together creating a family-like atmosphere. Their research suggested that keeping students and teachers together longer than the typical one-year period builds trust, belonging, and bonding (National School Public Relations Association, 1995).

Burke (1996) argued the following point from a stance of proper assessment and subsequent treatment:

Most parents do not send their children to a new pediatrician each year. Rather, they try to arrange for a single pediatrician to monitor their child's growth and development over time. Presumably, these parents conclude that one doctor's growing knowledge of their child makes the management of that child's health care more effective.

Similarly, research on school effectiveness has consistently suggested that long-term teacher/student relationships improve both student performance and job satisfaction for teachers. (p. 360)

He maintained that all students could benefit from this long-term monitoring of growth, but it seemed especially true for those students who come from families that are changing. Single-parent families, remarriage, same-sex relationships, and custodial parents are becoming more common than in the past. Given today's less-than-traditional family structures, a multiyear model of instruction may be one way of bringing stability and consistency to young lives (Burke). The assertion that children whose lives are less stable benefit most from looping classrooms is corroborated by researchers Hampton et al. (1997). Teachers reported that the multiyear experience appeared to provide a strong support system to an increasing number of children whose lives are riddled with change (Hanson, 1995).

Practitioners of looping have observed that trusting relationships that develop in the looping classroom spill over to the home. Over the span of a looping cycle, teachers not only build a detailed profile of each student, but they also come to better know the parents of the students. The longer-than-normal connection allowed for the development and promotion of working relationships between home and school. Through collaborative relationships, the responsibility for achievement was shared. Once parents had been informed of a teacher's levels of expectations, procedures, and policies and had time to observe the consistent application of these elements, the result was a familiarity with a routine that resulted in confidence, security, and opportunities for effective parent involvement (Shepro, 1995).

Additional research studies lended support to the strength of parent involvement over a

two-year period or longer. In a survey conducted by Denault (1998), 97% of the teachers who responded agreed that stronger home-school relationships were built by looping than were built in the traditional school model. George and Shewey (1997), in a survey of teachers who taught in multiyear designs, reported that 70% of the respondents agreed that long-term teacher/student relationships contributed to significant and positive effects on teachers' relationships with parents. George, Spreul, and Moorefield (1987) reported that 84% of the teachers they surveyed indicated that there were more positive relationships between parents and teachers in a looping design than in a traditional design. Finally, research conducted at one of the more ambitious looping initiatives in Attleboro, Massachusetts, indicated that parents appreciated the chance to become familiar with a teacher's instructional style and expectations for classwork and homework. They reported feeling more comfortable during the parent-teacher conferences the second year than they did the first year with the same teacher. For them conferences became more meaningful, given the perspective of the past and present (Grant et al., 1996).

If parent involvement is to have its greatest impact on student achievement, it must be meaningful. Programs become more meaningful when parents can see a benefit to their children, a sense of commitment from teachers to the principle that parents are important, and an assurance that parents do make a difference (Hampton et al., 1997). In a looping configuration, parents are more likely to witness these factors because of the duration of the relationship. Time, which is necessary in establishing evidence for these things parents value, is a commodity that favors a looping design over traditional classrooms (Lincoln, 1997). A continuous and relevant relationship with the teacher is more likely to occur within the extended period of a looping design because of the consistent and repeated communication through a single source.

Time

Schools operate on time schedules. One year is typically 180 days. School systems adopt calendars to establish the first day of school, the last day of school, and all the other events

in between. Teachers function within time limits. They are expected to outline a scope and sequence for each subject and attempt to meet as many objectives as possible within the given time frame. Teachers in looping designs contend that they have more time for teaching (Rasmussen, 1998).

Grant et al. (1996) reported that most teachers mentioned time as a factor in their discussions about looping. Teachers estimated a month of learning time built into the second (or third) year at the beginning of school, another month built into the end of the first year, as students end the year on a high note. Practitioners added endorsements that verified the claim made by Grant and his colleagues. Hanson (1995), an experienced looping teacher, made these observations:

A bonus for teachers is that they gain almost an extra month of teaching time. Getting-to-know-you time becomes virtually unnecessary during the second year, enabling us to get to learning without much review. We also find it easy to build on the experiences we shared the first year. (p. 42)

Jacoby (1994) expressed her ability to "jump right into projects without any of the usual transition time" (p. 59). Behavioral expectations had been established the year before, so time was saved on creating and testing a classroom management plan that worked. She needed to do very few assessments of skills. The children adopted the routines of the previous year and lost little time in considering alternatives to what had already proved successful for them.

Burke (1996) noted what Ann Ratzki said about time as it related to her experience as the headmistress at one of Germany's comprehensive schools. She explained:

We don't lose several weeks each September learning a new set of names, teaching the basic rules to a new set of students, and figuring out exactly what they learned the previous year; and we don't lose weeks at the end of the year packing students back up. Most important . . . teachers get to know how each student learns. . . . The importance of this is incalculable. (p. 361)

These same views are corroborated by Curtis (2001).

In its fall newsletter, the National Public Relations Association cited comments made by Jim Grant regarding the time element in relation to looping "September 2 is the 181st day of

school" (p. 1). He further explained that introductions were hardly necessary the second year. Everyone knew each other and what to expect. Teachers and students could get to work immediately as they built on the habits formed the previous year.

In a study conducted by Denault (1998), increased time on task was an immediate benefit noted by 100% of the teachers surveyed. The teachers agreed that there was no time lost the second year to organizational issues in September, making that month academically more productive than it was for students beginning with new teachers. Additionally, 94% of the teachers responded that the June "vacation mode" did not set in at the end of the first year when teachers and students were looping. The month of May was considered just as productive as the others in the year.

Mazzuchi and Brooks (1992) described their looping experiences as "a gift of time" (p. 62). They referred, not to the time they saved, but to the extra time it gave children to gain understanding over a two-year period as opposed to a one-year period in the traditional design. They reflected on the countless occasions they had longed to have a child for just a few more months at the end of a year's instruction. They decided one year to try teaching a two-year cycle and found the additional time with students was extremely valuable. The opportunities to make these personal connections over time proved especially valuable for emotional and intellectual growth, according to them. They observed development in a less fragmented way and in a more natural setting when it occurred over two years as opposed to one. They contended the longer period of time would allow them to facilitate deeper connections with classmates and ideas. Wood (1990) summarized a major purpose of the multiyear design as a means "to make sure that every child has the time to connect with the classroom, feel a part of all that goes on, and have the time it takes to succeed in school" (p. 34).

Vann (1997) characterized the second year as "more productive because teachers will not need the days or weeks usually taken to become familiar with each child's learning style, strengths, weaknesses, interests, or home situation" (p. 52). Others characterized the two-year

classroom as simply time effective because there was more time for teaching. Teachers with a new group of students would have to start all over and try an array of teaching strategies, discipline plans, and materials before they decided on the most favorable approach. Students in looping classrooms are engaged in learning sooner than in traditional classrooms because they did not spend the early weeks of the second year calculating the teacher's expectations (Forsten et al., 1999; Rasmussen, 1998; Simel, 1998).

One viewpoint deviated from all the previous observations and opinions as it challenged the time factor touted by looping advocates. Vann (1997) noted that time can be lost in a looping design. In a teacher's first cycle in a looping experience, he or she must master the new curriculum. Time may be lost at the beginning and throughout the year as the looping teacher attempts to manage new concepts, materials, and some programs of study unique to grade levels.

Academic Achievement

School districts throughout the country have speculated that multiyear assignments can enhance academic achievement; yet, few data have been collected that verify such speculations. Very few researchers have explored the academic benefits of looping. Checkley (1998) made the following observation, "Despite the apparent longevity and prevalence of multiyear programs in public education, there is not sufficient data to support what many educators contend: that multiyear programs have a profound impact both socially and instructionally" (p. 6).

However, a few studies have been conducted that included hypotheses about the merits of looping and a possible connection to academic progress. In 1993, East Cleveland Schools teamed with Cleveland State University and The Cleveland Foundation to pilot Project Families Are Students and Teachers (FAST) (Hampton et al., 1997). The researchers' findings suggested that students in looping designs exhibited substantially higher achievement scores than did students in the traditional grade organization. To counter a rival interpretation that the FAST teachers were simply superior teachers, researchers did a further comparison with groups those

same teachers had taught in previous years using the traditional one-year model. The comparison indicated that the students in the looping configuration still exhibited substantially higher achievement. Despite the fact that these teachers were more experienced when they participated in the two-year classroom, researchers credited the program design as an explanation for academic achievement (Hampton et al., 1997).

In a study of looping classes at Berino Elementary School in California, Yang (1997) compared test scores of third- and fifth-grade students in looping classes with test scores of students who were not looped. He reported that looping students outperformed their nonlooping peers in every comparison except the area of math concepts and application. His comparisons could be questioned because he failed to complete any statistical analyses. A significant difference may not have been evident had he conducted a full analysis of data rather than the simple mathematical computation he calculated to arrive at a plus or minus value for the differences in average mean scores.

In a more recent study, Skinner (1998) examined the academic achievement of second-grade students at two different schools. One school offered only a looping design. The other school was exclusively traditional in design. Both schools were in the same district. Scaled scores were used for analysis in comparing reading, math, and language arts. She noted a statistically significant difference in the area of language arts only. Initial differences were not addressed in her procedures, nor was school climate examined as an influencing factor. Other concerns stem from the use of scaled scores that were converted to state mean scores (normal curve equivalents are better suited for statistical analysis) and the relatively small population: only 71 students from the 9 classrooms combined participated in the study.

Lincoln (1997) credited looping as a probable factor in significantly improved academic performance at his school. He cited the results of comparative analyses of student achievement at the school where he was the principal. Looped students scored higher than nonlooped groups in language arts. Results of the statewide mastery test in writing also showed significant

differences that favored the looped students. The percentage of the group (that looped) meeting state goals for writing competence went from 41 in the 6th grade to 85 in the 8th grade, and in mathematics achievement from 64 in 6th grade to 75 in the 8th grade. The positive growth achieved in just two years has led Lincoln and his staff to include all students in the two-year looping design.

Test scores were not a part of the exploratory study conducted by George and Shewey (1997), but the educators, who participated in long-term teacher and student relationships and responded to the survey, were persuaded that the long-term experience helped them move students toward higher academic achievement. Of those educators, 80% said they were able to increase academic achievement for less successful students because of their ability to prescribe and assess their students' needs. Teachers further agreed that the long-term relationship made it possible for them to better design their instruction with academic achievement as a goal.

Simel (1998) stated that one emergent theme he recognized in his study was that teachers noted that looping had a positive effect on student achievement and even more so on creating positive attitudes toward learning. He noted that there were no quantitative data to validate those feelings expressed by teachers. He additionally stated:

Students benefit from increased instructional time, and increased parental involvement in activities which lead to academic success, whether they are in a looped classroom or not. However, these themes, as reported by teachers, are found in much greater degrees in looped classrooms. (p. 337)

Curriculum

Continuity over time is emphasized through the "spiral curriculum," whereby the same subject is taught in different forms at different stages (Leichter, 1980). In the looping design, continuities over time are fostered along with the reexamination of subject matter at different stages. Leichter found this ability to make connections in learning experiences especially true for looping situations. He stated its potential by stating:

This explicit return to reexamination of earlier learnings in turn serves as a potential

model for the individual's lifelong learning and educational agenda. Because the curriculum is organized in regular and definite patterns that remain largely the same from year to year, it is again possible for the child to look both backward and forward in examining his or her educational experience. (p. 368)

Looping in self-contained environments allows the teacher to organize education to relate subjects across time and across disciplines.

Teacher Stephanie Jones related how she reaped the benefits of looping in the second year. For her, more time for teaching translated into a richer curriculum. Jan Jubert stated that she covered more material. Sara Oldham said she addressed topics when students were developmentally ready for them. All these educators agreed that the looping design had changed their perceptions of the curricula. They visualized the curriculum as an extension of the previous year and used a spiraling approach in their instruction (Rasmussen, 1998).

In Hyattsville, Maryland, teachers viewed looping as an opportunity to enhance instruction. They invested time in developing a "concordant relationship" among students, parents, teachers, and administrators at the school along with supporters throughout the community. Teachers regarded the sustained contact with students as an opportunity to concentrate on the curriculum the second and third year with students. They built on shared experiences from the past and made critical links across the curricula to promote learning (Kelly et al., 1998).

Lincoln (1997) rationalized that teachers with multiyear assignments had longer to relate, interrelate, and integrate the curriculum to meet both individual and group needs. Knowledge of the curriculum over the two-year period also gave teachers greater flexibility in reviewing (looking to the past) and previewing (anticipating the future) concepts compared to the teachers who had students for one year. As content and skills work were spread over the two-year span, articulation between grades became more automatic and review more of a continuous process, reducing time needed for review and assessment the second year into the loop.

Zahorik and Dichanz (1994) witnessed multiyear grouping in German schools. They distinguished German schools as being philosophically different from American schools.

German schools had never embraced behaviorism and its emphasis on fragmented knowledge, direct instruction, and reinforcement contingencies to the extent U. S. schools had. In their estimation, multiyear grouping helped make connections through a constructivist perspective on learning in several ways. First, teachers knew students' prior knowledge because they had been involved in its development. Knowledge that students accumulated outside of school was more apt to become known to teachers because of the long-shared relationship. Teachers also came to know preferred ways of learning, behavior patterns, interests, emotional stability, and social skills. This combined knowledge, they concluded, aided students in making connections that develop and strengthen their internal knowledge structures and built their metacognitive capacity (Zahorik & Dichanz).

George and Shewey's (1997) survey of teachers in looping designs asked four questions related to the curriculum. Teachers indicated that having the same students over a period of more than one year enabled them to increase the level of time on task (76%). They could avoid unnecessary duplication from previous years (80%). They had a broader sense of and more familiarity with their subject area (65%), and 74% agreed that they used more innovative instructional strategies in their classes.

Two assertions made by Milburn (1981) supported the potential for adjustments in the curriculum the second year a teacher instructed a group. A teacher who worked with the same group of students for two or more years would be in a better position to evaluate students' progress and prevent unnecessary repetition of instruction than the teacher who had no previous contact with the students. Additionally, curricular content could be matched to known abilities, and students would have more time over the course of two years to assimilate and consolidate learning with a familiar teacher and classmates.

Several educators have expressed similar views as those already noted, but they have chosen to limit their comments to their personal experiences as looping teachers. Jacoby (1994) said her second year curriculum was partially defined by her previous experiences with her

students. She did few assessments of skills and knew where they had left off in the spring. Mazzuchi and Brooks (1992) noted that they were able to spread themes over a longer period, allowing opportunities to build conceptual knowledge and develop attitudes and behavior for maximum learning. Hampton et al. (1997) observed teachers as they began the second or third year with an informed view of each child's abilities and personality and some knowledge of the child's home and family circumstances. The teachers accommodated students' strengths and weaknesses in tailoring programs of instruction. They "did not feel compelled to drag students through material that should be covered in a particular grade. Students work toward understanding and mastery--surpassing grade-level expectations in some areas, while they are given more time to mature in others" (p. 8). Miner (1998) reported that teachers with an additional year with the same students better tailored instruction to meet the needs of students than they did the year before. Curriculum planning was focused on long-term goals that transcended one year. The teachers she observed relied less on the district's texts after they gained an understanding of their students. They were said to have designed and sequenced content based on students' needs and interest in a pedagogy connecting students to one another to build relationships and increase understanding (Miner).

Stability

Stability was a recurrent theme in the discussions of principals and teachers as they reflected on looping practices at their schools. Simel (1998) recorded teachers' reactions to their experiences as looping teachers. One teacher described what she believed, "The child feels like school is a second home. . . . You can tell by the way they act" (p. 336). Another teacher at the same school commented, "Half these kids call me mom because I don't think they get it at home, the stability. So I guess this will be a great stable environment for kids who don't have that at home" (p. 336).

Wynn and Walberg (1994) advocated more long-term relationships in schools. They

were of the opinion that "perhaps it is time for our country to place greater emphasis on stability--an all too rare commodity in the lives of many American children and youths" (p. 530).

Most educators and administrators in their statements about looping's benefit as a stability factor qualified who benefited most, in their estimation, from the arrangement. Lincoln (1997), a middle school administrator, reflected on observations he made at his school:

Providing stability in young people's lives may be more important in the middle school years than at any other time in their student careers. With the weakening of adult-child relationships in today's society, due to such conditions as single parenthood, blended families, and families where both parents work, the multiyear looping model provides an additional measure of stability by building stronger relationships between students and teachers. (p. 58)

Denault (1999) noted the responses of teachers in a Massachusetts school district. They considered looping's stability especially beneficial to students with special problems. Denault reported, "For students with special problems, social or academic, teachers viewed looping as offering stability that is vital to their progress" (p. 24). The teachers cited the consistency of expectations, familiarity with learning styles, and continuity of teaching across two years as beneficial to all students, but especially for those considered at risk of school failure.

At a Maryland elementary school, the most obvious benefit of the looping practice was stability (Haslinger, Kelly, & O' Lare, 1996; Kelly et al., 1998). With a student population where 37 different countries were represented, 25 languages were spoken, and 65% of the families were recent immigrants, the staff wanted to create a school environment where all students felt a sense of value and belonging. Staff members also faced other challenges. Among those challenges were: a high mobility rate (65%), poverty (87% qualified for free lunches), and a low percentage of parents who had earned a high school diploma (18). They implemented a three-prong strategy in response to the unique characteristics of a highly diverse population. Looping, an exhibition center to highlight students' work, and attendance incentive programs were interventions designed to counter students' apathy and anonymity. The staff viewed the three-year looping design they adopted as a means of contributing to the stability that had been lacking for their students.

Crosby (1998) realized from her classroom experience that an environment that nurtured children through two of their adolescent years could help at-risk students succeed. She said the consistency and continuity spanning two years were key elements that seemed instrumental in individual success stories. She characterized the looping classroom as a "stable haven." Familiar adult and peers during the second year provided her students the stability some did not find at home.

An anonymous writer (1998) regarded looping as particularly beneficial for certain children. Shy children, it was noted, would not have to get comfortable with a new teacher or classmates each year. Students with difficult home lives would gain more stability with an adult who stayed in their lives longer than the typical one-year classroom teacher. The classroom atmosphere the second year, it was reasoned, would be one of familiarity where routines, discipline plans, and expectations were predictable.

Hanson (1995) valued the multiyear assignment at her school as being vital to children whose lives were "riddled with change" (p. 43). Her students experienced change in residence, change in family structure, and change of economic status. The children who came from broken homes, who went home to empty houses, or saw parents only on weekends seemed to benefit from the stability of a second year with a teacher who considered himself or herself to be a role model, mentor, and friend. She stated that the multiyear assignment appeared to provide a strong support system for those children. Vann (1997) cited fragile homes that children come from as a reason to implement such a practice. He defended his position by stating that looping teachers provided familiar and welcome "significant others" in students' lives, giving them a greater sense of security.

Other looping proponents maintained that the two-year classroom was tailor-made for difficult children (Grant et al., 1996). They identified the shy child, the special needs child, the emotionally fragile child, and even the bully of the class as the ones who most needed the stability and security of the long-term relationship and predictable environment. They viewed

the supportive structure of the class as a factor that gave teachers, parents, and support staff more time to introduce appropriate interventions for these children and work toward resolving some of the difficulties that hindered their growth.

Concerns Associated with Looping Classrooms

Legitimate concerns have been voiced by individuals questioning the efficacy and practicality of keeping teachers and students together in long-term relationships. It would be unfair and unrealistic to suggest that the approach has no problems. Examining looping designs for their merits and imperfections, the most frequently cited concerns focus on teacher limitations, a compatible match of students and teacher, entering students, teacher reservations, and separation of the group.

Teacher Limitations

Parents are often apprehensive about their child's placement for more than one year with a teacher they perceive to be weak or mediocre (Lincoln, 1997; Million, 1996). George and Shewey (1997) surveyed parents who had a child enrolled in a long-term teacher/student configuration. They reported that what seemed to cause parents the most concern was the chance that their child might get a poor teacher. For most parents, it was the potential for having a poor teacher, rather than the actuality, that most concerned them.

Grant and his colleagues (1996) agreed that the biggest concern parents had when considering a multiyear arrangement for their child was, "What if my child gets a bad teacher for two years?" (p. 105). As looping proponents, they applied the following line of reasoning:

Schools following conventional curriculum guidelines tend to introduce new concepts and content in grades one, three, five, and seven, and reinforce the concepts and content in grades two, four, six, and eight. This sort of "introduction and review" cycle actually acts as a buffer between students and a poorly performing teacher; an academically solid student can usually survive a year with a poor teacher because he or she will be exposed to the content for two years in a row. It's not the best arrangement in the world, and arguably, a poor teacher should not be teaching for one year, let alone two;

but the reality remains that it is almost impossible for a school system to unseat a tenured teacher.

However, the stakes go up dramatically in terms of teacher performance when the multiyear configuration is introduced. Even the best students will be impacted heavily by two years with a poorly performing teacher; kids who need more attention and guidance from a classroom teacher simply won't survive academically. (p. 105).

The possibility of getting a poor teacher for two successive years in a traditional design was not addressed by this group of looping advocates.

Vann (1997) questioned the efficacy of looping in terms of teacher ability. He credited all teachers as having both strengths and weaknesses. In the traditional one-year system, students may go from a teacher who is gifted in teaching one particular subject to a teacher who is strong in a different subject. He suggested that looping relegated children to two consecutive years with an instructor who may not teach an important curriculum area as capably as other grade-level teachers. They also may not be able to bring out the best in a certain child's area of special interest. Forsten and colleagues (1997) voiced the same concern. They stated that in looping designs, a teacher's strengths are magnified over two years, but so are his or her weaknesses. Care must be exercised not to turn a teacher's weakness into a student's weakness.

In the FAST Project (Hampton et al., 1997), researchers admitted that effective teachers must be central to any successful educational innovation. They then added the disclaimer that the effectiveness of specific instructional techniques would vary from teacher to teacher. All FAST teachers volunteered for the study comparing the academic achievement of looping students to nonlooping students. The researchers outlined how they identified and encouraged teachers' characteristics and behaviors that contributed to successful learning as a part of their study of looping classrooms. These interventions with teachers throughout the study may have resulted in measures that favorably affected the looping effect and negated the effect of a low-performing teacher.

Wynn and Walberg (1994) indicated that looping might be a spur for promoting teacher quality. "As for weak teachers, the existence of persisting groups of students and teachers may

be a valuable stimulus for quality control" (p. 530). They suggested that inadequate teachers might be tolerated in schools where teacher and student shifts are common, but incompetence would become more obvious for prolonged periods of time and are less likely to be tolerated.

Ted Tibodeau, assistant superintendent in the Attleboro, Massachusetts, public school district, essentially agreed that looping established a degree of quality control among teachers. He argued, "Parents aren't going to settle for mediocrity with a two-year arrangement" (as stated in Grant et al., 1996, p. 29). He indicated that some teachers had left his school system because of the pressures related to multiyear teaching. One veteran teacher resigned after she received a less than favorable reaction from her group of parents. He made no comments regarding quality control for students who found looping configurations unsuitable for their needs.

George and Shewey (1997) recorded the comments students were encouraged to make at the end of a survey that explored long-term teacher/student relationships. The following comments were among those reported:

1. "I don't like staying with the same teacher because if you get a bad teacher, you have him or her for two years."
2. "I think if we would go to different teachers, we would learn more because teachers are not the same and they know different stuff."
3. "I hated staying with the same teacher because I would've liked to have had a change and going from the seventh grade to eighth grade with the same teacher made me feel like I was in seventh grade again"
4. "I don't like staying with the same teacher because you had nothing to look forward to at the beginning of school. And they [teachers] act like your parents." (p. 21)

Compatible Matches

Another concern with looping designs centered on personality conflicts. An ongoing conflict between teacher and student can damage the student's self-esteem and wear down the

teacher (Forsten et al., 1997). This perceived negative impact on the learning environment was verbalized by teachers, students, and parents. One educator in expressing his concerns, particularly about a personality conflict between teachers and students, said, "Teachers have always felt accountable for their students' growth whether it is a one- or multi-year connection. If the teacher-student relationship is not positive, a multi-year connection only makes this worse" (as stated in George & Shewey, 1997, p. 20).

George and Shewey (1997) also reported student reactions to long-term arrangements.

One student voiced concern:

I don't believe in having the same teachers. I think we should have a chance to mix with other teachers and kids. It's hard when you don't like the teachers in the group and you have to put up with them for another year. (p. 21)

Another student seemed to shared this fear by stating, "I do not like having the same teachers and students for more than one year. . . . The teacher may not really like you and then you could be stuck with each other for two years" (p. 21).

An occasional complaint among parents was that the teacher seemed to dislike their child (Forsten et al., 1997; Grant et al., 1996). Forsten and her fellow advocates for looping suggested that the conflict may fall within the range of a parent's misunderstanding of the situation to a student's learning style that clashed with a teacher's instructional style to a student who came into the classroom with a hostile attitude that reflected the feelings of the parents.

Burke (1996), Lincoln (1997), Newberg (1995), and Vann (1997) commonly stated that a potential disadvantage of looping was an inappropriate or incompatible match between teacher and student. Crosby (1998) said parents of children in two-year assignments are more vocal when they believe that the arrangement is not working for their child. Despite all the attempts to avert the conflicts that could occur, mismatches have continued to present a challenge in all educational settings.

Several teachers warned that the particular combination of students in a class could adversely affect the group's potential to learn (Hanson, 1995). The class atmosphere and quality

of instruction may suffer if a class has a preponderance of strong-willed, unruly children. This situation is undesirable for one year, much less two. A dysfunctional group creates a lose-lose situation; both students and teacher suffer (Forsten et al., 1997).

Others agreed that every so often a difficult class did come along for teachers. Whether there were too many summer-born boys, or too many dominant personalities, or a bazaar alignment of the outer planets, teachers affirmed some groups just never seemed to function well together. Teaching in situations where group dynamics were poor was stressful and discouraging to most teachers. Needy classrooms were demanding on teacher time and energy (Grant et al., 1996).

Conflict can also arise between parents and teacher. Some parents may disagree with teaching methods, some may have unrealistic expectations for their child; and others may be unreasonable or hostile people. Whatever the reason, teachers find it painful to deal with belligerent and demanding parents for a single year, and more so for two years (Grant et al., 1996). No evidence could be found that argued the position of a hostile or unreasonable teacher nor the unfavorable implications of having such a teacher.

Entering Students

High mobility rates are a major factor in many school districts. While a large turnover in the student population is a problem for any classroom, it may, in some instances, lessen the effectiveness of the looping configuration because it relies so heavily on long-term relationships before its benefits can be realized (Forsten et al., 1997).

Teachers have cautioned that two-year classes need to be sensitive to new students entering the loop. Because strong bonds have been established among classmates and teachers, students and teachers need to make efforts to include new students in routines and practices that are unfamiliar to them. Otherwise, these new students may feel like outsiders (Hanson, 1995).

Simel (1998) shared the concerns of looping teachers as new students entered their

classrooms. All the teachers agreed that new students have an effect on classroom cohesiveness. One teacher explained that getting new students upset the balance. New students came into a classroom who knew the routines and knew what the teachers expected, and they (new students) felt lost. She expressed frustration with having to stop and explain herself to the new students while the veteran students waited. Another teacher, in the same study, expressed a similar concern that new students felt left out much of the time. One teacher added that the effects on new students and on the class increased the later the new students entered the classroom's looping process.

Simel (1998) identified two factors that determined the positive or negative effect of new students on the established looping classroom. The percentage of new students who enter the loop and new students' personalities were the factors he monitored. A small number of students entering the loop were viewed as having little or no negative effect. In contrast, a large number of students could negatively impact class dynamics. He also observed that new students who tried to alter the working dynamics of the classroom with domineering personalities were met with hostility from the students who had been together for a year or more. Mild-mannered students blended easily into the looping groups. Similar results might be expected for the traditional classroom.

One principal argued that new students could be adversely affected by the liberties many looping teachers took in changing the curriculum. Some looping teachers have been persuaded by proponents to view the curriculum as a two-year course of instruction, rather than 2 one-year programs taught in succession. This approach could have negative outcomes for students who leave the loop and for children placed in the class the second year. The scope and sequence of instruction for them would have serious gaps if the looping teacher omitted certain concepts from the customary grade-level curriculum the first year, in the expectation of teaching them the second year (Vann, 1997).

Teacher Reservations

The most frequently mentioned concern voiced by teachers going into looping was the time it would take to learn a new curriculum. Long-term teacher/student assignments ask teachers to make a radical shift away from grade or subject identification as their major focus and take a longer view of the students and subjects they teach (Newberg, 1995). In the beginning, teachers will invest more time in learning the second-year curriculum, one with which they may not be familiar (LAB, 1997). The only reservation Jean Eby expressed was, "A main concern for me was the new curriculum. . . . My biggest fear became, would my students be at a disadvantage for having me two years in a row?" (as cited in Little & Dacus, 1999, p. 44). Teachers who are beginning loops would have to assume the responsibility for coordinating the district and state curricula, materials and resources, state and national testing requirements, and child-driven interests for another entire year (Anonymous, 1998; Forsten et al., 1997; Forsten et al., 1999). Because teachers are so accustomed to teaching the same grade level year after year, many do not want to change and are unwilling to learn another grade's curriculum (Million, 1996). In some states, teachers may have to learn a specialized curriculum for a particular grade level. Many states mandate drug education or health education in specific grades (Forsten et al., 1997).

The decision to stay in the same room or move to a new room the second year has to be weighed and justified by each teacher. Some teachers object to moving to another classroom the second year while other teachers make the decision to move to accommodate parents who want their children to feel promoted to another classroom the second year. Others choose to stay in the same room because of the hardship of physically moving large amounts of materials and personal belongings (Forsten et al., 1997). Teachers might move because they feel it is important for students to be among their peers. They might also want to be with teachers at their grade level to take advantage of advice from veteran teachers or to avoid feeling left out of grade-level decisions and activities when they are in a different physical space (Forsten et al.,

1997). Some teachers decide not to loop because it would mean leaving a grade-level team where teachers work well together (Million, 1996).

Teachers already in looping designs fear that their classrooms may become dumping grounds. School traditionally has been a place of support and nurturing, and the multiyear classroom strengthens this tradition (LAB, 1997). Because the multiyear classroom is such a supportive environment for high-needs students, there exists the temptation to place many of the children with special needs in the looped classroom. This can overwhelm the teacher and actually reduce the effectiveness of the program design (Grant et al., 1996; LAB). This issue must be discussed beforehand in creating a balance of students and establishing appropriate guidelines.

Separation

It is true that saying good-bye to close relationships that have existed between teacher and child and among classmates in a looping design is difficult (Forsten et al., 1997). Separation does seem more stressful at the end of two years compared to the single-grade, single-year classroom (Hanson, 1995; Higuchi, 1994; Jacoby, 1994). It is a concern equally expressed by teachers, students, and parents.

As the end of their time together approaches, everyone realizes that they will be leaving each other. The group is breaking up. Teachers and parents report some very emotional separations. Parents have to be assured and students reassured that separating the group would not be the end. The bonds formed in long-term teacher/student relationships are not easily severed, even with separation. Many teachers report a deep and strong connection with their students, years after their time together (Grant et al., 1996).

Summary

This chapter has presented a review of literature that focused on research findings and writings relative to the topic of looping. A description of looping practices along with variations on its implementation were presented. Historical connections were examined as predecessors to current interpretations of the design. Operating principles that serve as basic guidelines in forming persistent groups were outlined. Relationships, time, academic achievement, curriculum, and stability were investigated as the major advantages associated with looping. Teacher limitations, entering students, compatible matches, teacher reservations, and separation of the group were inspected as major concerns associated with looping.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this study was to compare the academic achievement of students in looping programs from school systems in East Tennessee to their peers in traditional one-year instructional programs. This chapter describes the research design, the population, instrumentation, data collection methods, and methods of analysis used in the study.

Research Design

The causal-comparative quantitative approach to exploring possible cause-and-effect relationships was employed in this study. The purpose of this study was to determine if there are differences in the academic achievement of students in looping programs compared to those in traditional programs. Scores of students enrolled in pre-existing groups were compared in this retrospective analysis of standardized achievement test scores. This method is often referred to as *ex post facto* research (Gall et al., 1996). The research design features the study and analysis of data based on causes that are examined after they have exerted their effect on another variable. Even though this design does not provide for a direct test of causation, it will provide information that will support or refute causal explanations. In this case, achievement test scores were collected from student records and comparisons were made between those students who participated in looping programs and those who did not. Findings could suggest a link between program design and academic achievement.

Population

Telephone calls were placed to the 255 elementary schools listed in the Directory of Public Schools issued by the East Tennessee Regional Office. The researcher posed the

question, "Do you have a looping program at your school whereby a teacher remains with the same group of students for two or more years?" There were 26 elementary schools that indicated that they did offer a looping design at their schools. Of those 26 schools, only 4 confirmed that a 3rd/4th grade loop had recently completed a cycle at their schools. The 22 schools eliminated from the study offered looping as a program design at a grade level other than third/fourth, or they had just initiated a looping design and had not completed a cycle at the time the study was being conducted. Failure to meet the parameters outlined by the study was the justification used to exclude those classrooms.

The population for this study consisted of a list of all students who had completed fourth grade in 2001 at every school in East Tennessee that implemented a third/fourth grade looping design. A third/fourth grade configuration was chosen for the study because most school systems elect to begin standardized testing for students at second-grade level. The list included all students in looping programs and all students in traditional programs. The classrooms were all self-contained for delivery of instruction. In a small number of cases, students opted out of the looping program design after the first year while others entered the loop at the beginning of the second year. If both years had not been spent with the same teacher for two consecutive years, those students were excluded from the study. Students who were enrolled in a traditional one-year design had to have spent both third and fourth grades at their respective schools. Otherwise, they were excluded from the study to control for the possible impact of a different school climate. The target population included 308 students. Of those 308, 107 students had been enrolled in looping designs at their schools in 3rd and 4th grade and remained with the same teacher for both years; 201 students had been enrolled in single-year traditional designs at the same schools and had been taught by a 3rd-grade teacher for 1 year of instruction and were promoted to a different teacher for 4th grade.

Instrumentation

Academic achievement between the groups being studied was compared through the use of the *TerraNova* Comprehensive Test of Basic Skills (CTB/McGraw-Hill, 1996). Each spring, students in Tennessee schools in grades three through eight are mandated to take an achievement test as part of the Tennessee Comprehensive Assessment Program (TCAP); however, the school systems in this study elected to initiate testing in earlier grades. The primary aim of the test is to provide an accurate measure of academic basic skills. Content knowledge in subject areas is assessed as well as the application of such knowledge. The test uses multiple-choice questions and has set time limits. Although the test questions are limited to a multiple-choice format, the test questions are said to go beyond workbook drill and practice. As encouraged in the state frameworks, the test proposes to evaluate students' high order thinking skills. This format is similar to that used on the National Assessment of Educational Progress (NAEP) test (Tennessee Department of Education, 1999).

The *TerraNova*, published by CTB/McGraw-Hill (1996), provides both norm-referenced and criterion-referenced information. The test uses the most recently available national norms from 1996. Norm-referenced information permits the achievement of students to be compared with the performance of a national sample of students. Summary reports present results expressed as national percentiles. Median national percentile performance data are provided for reading, language, mathematics, science, and social studies. Criterion-referenced information allows the comparison of student achievement against a specified level of performance.

The test questions use a visual format with color and graphics to encourage student involvement and clarify test items. The mathematics achievement test involves more problem-solving questions that require greater reading comprehension than in the past. The reading/language subtest uses authentic literature and articles from magazines and newspapers to capture student interest. The test measures thinking as well as computational and mechanical skills. Third-grade students bubble their answers in the test booklets. Students in grades four

through eight use separate answer sheets (Tennessee Department of Education, 1999).

Statistics describing the CTBS have revealed them both reliable and valid. Testing for standardization was conducted in the spring and fall of 1996. The public school samples were stratified by region, community type, size, and Orshansky percentile, which is an indicator of a district's socioeconomic status. Standardization and norming procedures, as well as research studies addressing reliability and validity issues are reported in the Tennessee Coordinator's Handbook (CTB/McGraw-Hill, 1997).

Data Collection

Approval to initiate this study was obtained from the Institutional Review Board at East Tennessee State University prior to any data collection. Written permission to conduct this study was obtained from authorized personnel in each of the four school districts (see Appendix A). School principals were subsequently contacted and briefed concerning the specifics of the study. A roster of looping students provided at each site facilitated the proper coding of those students to distinguish them from the general population of third and fourth graders at each school.

Data collection began in the spring of 2002 when the researcher traveled to the four participating schools. Reports provided by the testing service were obtained from official cumulative records for each student and copied onto forms prepared in advance by the researcher (See Appendix B). Use of coded identities for their names and schools protected the privacy of all students. Students were also separated according to gender by using two rosters for each classroom teacher, one for female members and one for male members. Designated personnel at each of the sites supervised the accessing of records and recording of scores to further ensure the integrity of the study and the confidentiality of identities.

The major source of data for comparison was the Normal Curve Equivalent scores (NCEs). These scores are used to calculate gains from one test to the next. The NCE is an equal-interval score that can be treated arithmetically (Cannon, 2000). NCEs for Total Reading, Total

Language, Total Math, and Total Battery were used to make comparisons for statistically significant differences. These differences were studied at three levels. Primarily, comparisons were made to determine if differences in academic achievement for Total Reading, Total Language, Total Math, and Total Battery existed between looping students and their peers in one-year instructional designs. The first comparison was made to detect initial differences in the two groups' scores. Scores for 1999 were recorded to determine if there were differences in the two groups upon entering third grade. Analysis of the following years' scores took these initial differences into account. A second comparison was made to determine any differences that may have existed after the first year. Scores for the testing year 2000 were recorded for this purpose. Another comparison was made at the completion of the two-year cycle. Scores for 2001 were recorded for this purpose. Secondary comparisons were made to determine if a difference existed between males and females in the population and to determine if there were interactions between gender and program design. Data collection forms included designations for gender and program design in the format for this purpose.

Data Analysis

As an initial step in the data analysis, descriptive statistics were performed to provide a profile of the population being studied. Data used in the statistical analyses for this study came from the *TerraNova* CTBS. The Statistical Program for the Social Sciences (SPSS) was used to analyze data. A series of *t*-tests for independent groups was conducted to determine if there were initial (second grade) achievement differences between students entering third/fourth grade looping classrooms and those beginning traditional classroom designs. Analysis of covariance (ANCOVA) was used to identify differences in achievement test scores while controlling for prior academic achievement. Second-grade scores, third-grade scores, and fourth-grade scores on the *TerraNova* were collected for these comparisons. Gender differences were also analyzed using ANCOVAs. A two-way analysis of covariance (ANCOVA) was used to answer the final

research question and identify interactions between student gender and the type of instructional program design.

All statistical tests were conducted using a preset alpha level of .05 to determine if statistically significant differences occurred in the Total Reading, Total Language, Total Math, and Total Battery scores of students in looping and nonlooping groups by program design, gender, or an interaction of the two.

Summary

Chapter 3 presented the methodology and procedures that were used in this study. The causal-comparative research method was chosen and explained. The population and selection method were described. *TerraNova* CTBS along with its reliability and validity were presented. The methods of data collection and data analysis were detailed. Results of the analysis of data research are presented in Chapter 4.

CHAPTER 4

ANALYSIS OF DATA

The findings of the study are addressed in this chapter. The purpose of the study was to compare the academic achievement of students in looping programs from school systems in East Tennessee to their peers in traditional one-year instructional programs. The scores of students in six looping groups were compared to those of similar peer groups from 16 nonlooping classrooms on a standardized test, the *TerraNova* Comprehensive Tests of Basic Skills (CTB/McGraw-Hill, 1996). The study focused on classes that looped for a third and fourth grade combination and their peers who were in the same schools in a traditional one-year arrangement.

Six research questions were formulated to guide the investigation. The first research question called for a descriptive profile for the population.

Research Question # 1

What is the demographic profile of students in the study?

The population studied consisted of 308 students in the looping and traditional classrooms combined. All students completed fourth grade in 2001. Demographic information of the population included class design and gender. Characteristics of the population are presented in Table 1.

Table 1

Demographic Profile of the Population

<u>Classroom Structure and Gender</u>	<u>f</u>	<u>%</u>
Traditional		
Male	102	50.7
Female	<u>99</u>	<u>49.3</u>
Total	201	100.0
Looping		
Male	46	43.0
Female	<u>61</u>	<u>57.0</u>
Total	107	100.0
Total		
Male	148	
Female	160	

As shown in Table 1, there were 201 students included in the study from traditional program designs. These students were with a teacher in third grade, and then were assigned to a different teacher in fourth grade where they also had new classmates. There were 107 students included in the population from looping designs. These students had the same teacher and were with the same classmates for both third and fourth grades. There were 148 male and 160 female participants in the study.

Research Question # 2

Are there initial differences in the achievement levels of students beginning third-grade looping programs and students beginning third grade in traditional programs for Total Reading, Total Language, Total Math, and Total Battery? The null hypotheses associated with this research question were as follows:

Ho2₁: There is no difference in the total reading achievement levels of students beginning the third grade in looping programs and those beginning the third grade in traditional programs.

Ho2₂: There is no difference in the total language achievement levels of students beginning the third grade in looping programs and those beginning the third grade in traditional programs.

Ho2₃: There is no difference in the total math achievement levels of students beginning the third grade in looping programs and those beginning the third grade in traditional programs.

Ho2₄: There is no difference in the total reading achievement levels of students beginning the third grade in looping programs and those beginning the third grade in traditional programs.

Independent groups *t*-tests were conducted to determine if significant differences existed in the groups of students at the beginning of the two-year period under study. The students' second graders' scores on the *TerraNova* Standardized Assessment were used to detect differences on the four subtests that were the focus of the study. Table 2 presents the *t*-test results for the groups using scores from 1999. The results would indicate if the groups were equal upon entering the third grade.

Table 2

Results of t-test for Mean Differences of Students Entering Third-Grade Designs in 1999

<u>Subtest</u>	<u>Program Design</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>	<u>p</u>
Total Reading	Traditional	201	54.86	19.96	2.17	.03*
	Looping	107	60.88	24.73		
Total Language	Traditional	201	55.05	21.49	2.51	.01*
	Looping	107	61.79	24.09		
Total Math	Traditional	201	56.92	23.43	2.45	.02*
	Looping	107	63.95	24.96		

Table 2 (continued)

<u>Subtest</u>	<u>Program Design</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>	<u>p</u>
Total Battery	Traditional	201	55.56	19.48	2.61	.01*
	Looping	107	62.03	22.96		

*p < .05

As shown in Table 2, there were statistically significant differences between the looping groups and the traditional groups upon entering third grade. Significant differences occurred in Total Reading ($t = 2.17, p = .03$), Total Language ($t = 2.51, p = .01$), Total Math ($t = 2.45, p = .02$) and Total Battery ($t = 2.61, p = .01$). Hypotheses Ho2₁, Ho2₂, Ho2₃, and Ho2₄ were all rejected. The students entering looping designs consistently had higher means on all four subtests. The entering students in looping designs acquired higher scores for Total Reading (60.88 vs. 54), for Total Language (61.79 vs. 55.05), for Total Math (63.95 vs. 56.92), and Total Battery (62.03 vs. 55.56) as evidenced by scores reported for 1999. All comparisons indicate that the groups were not equal going into the third grade. Analysis of the following year's scores takes these initial differences into account.

Research Question # 3

Are there significant differences at the ends of the first year between students in looping designs and those in traditional designs for Total Reading, Total Language, Total Math, and Total Battery while controlling for prior achievement (initial differences detected in 1999)? The null hypotheses associated with this research question were as follows:

Ho3₁: There is no difference in the 2000 total reading achievement levels of third-grade students in looping programs and those in traditional programs while controlling for initial (1999) total reading differences.

Ho3₂: There is no difference in the 2000 total language achievement levels of third-grade students in looping programs and those in traditional programs while controlling for initial (1999) total language differences.

Ho3₃: There is no difference in the 2000 total math achievement levels of third-grade students in looping programs and those in traditional programs while controlling for initial (1999) total math differences.

Ho3₄: There is no difference in the 2000 total battery achievement levels of third-grade students in looping programs and those in traditional programs while controlling for initial (1999) total battery differences.

Analysis of covariance (ANCOVA) program design was used to determine if differences existed between the groups at the end of third grade while controlling for prior achievement. Scores reported for all groups in 2000 (at the end of third grade) were compared while controlling for the scores reported in 1999 (at the end of second grade). The results of this analysis are shown in Table 3.

Table 3

Results of ANCOVA: Comparison of Adjusted Means for Students Completing Third-Grade Designs in 2000, Controlling for 1999 Scores

<u>Subtest</u>	<u>Program Design</u>	<u>n</u>	<u>M</u>	<u>M (Adjusted)</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Total Reading	Traditional	201	52.27	53.71	18.82	13.46	.00*
	Looping	107	62.23	59.38	21.03		
Total Language	Traditional	201	54.91	56.45	19.70	5.48	.02*
	Looping	107	63.51	60.28	20.85		
Total Math	Traditional	201	56.85	58.23	20.62	5.39	.02*
	Looping	107	65.56	62.53	20.28		
Total Battery	Traditional	201	54.71	56.36	17.72	11.31	.00*
	Looping	107	63.76	60.33	18.87		

* $p < .05$

As shown in Table 3, the results of the analysis of covariance (ANCOVAs) tests indicate a statistically significant difference in groups at the end of the first year after controlling for prior achievement on the four subtests targeted by the study. Students in looping designs showed significant gains over their counterparts at the end of third grade, while controlling for 1999 scores in the specific subtests. The Total Reading scores were significantly different ($F = 13.46$, $p = .00$), as well as Total Language scores ($F = 5.48$, $p = .02$), along with Total Math ($F = 5.39$, $p = .02$), and Total Battery ($F = 11.31$, $p = .00$). Those students in looping designs scored significantly higher in reading achievement on the *TerraNova* Standardized Assessment ($M = 59.38$), as compared to students in traditional designs ($M = 53.71$). Their language achievement was higher ($M = 60.28$) than their counterparts' scores ($M = 56.45$). Math achievement showed similar gains with looping students scoring higher ($M = 62.53$) than students in traditional

designs (58.23). Total Battery continued the pattern of gains by looping students ($M = 60.33$) in comparison to traditional students ($M = 56.36$). All comparisons indicate that significant differences existed among the mean scores at the end of third grade. Null hypotheses $Ho3_1$, $Ho3_2$, $Ho3_3$, and $Ho3_4$ were all rejected. It should be pointed out that at the time at which the 2000 test was administered, students had not yet had the chance to "loop" with the third-grade teacher, because they had just completed their first year with the teacher. In a sense, this was not a test of looping. To the extent that children are "self-selected" into the looping program, it is possible that the differences that were seen were due to that effect. Analysis of the 2001 scores takes the 2000 differences into account as well as the initial differences in achievement scores, and as such, may be a more accurate portrayal of the effects of looping. The 2000 through 2001 school year was the year in which students did "loop" with the teacher. The results are addressed in Question # 4.

Research Question # 4

Are there significant differences at the end of the two-year period (2001) between students in looping designs and those in traditional-year designs for Total Reading, Total Language, Total Math, and Total Battery scores while controlling for prior achievement (initial differences in 1999 and differences after the first year in 2000)? The null hypotheses associated with this research question were as follows:

$Ho4_1$: There is no difference in the 2001 total reading achievement levels of fourth-grade students in looping programs and those in traditional programs while controlling for initial (1999) and third-grade (2000) reading differences.

$Ho4_2$: There is no difference in the 2001 total language achievement levels of fourth-grade students in looping programs and those in traditional programs while controlling for initial (1999) and third-grade (2000) language differences.

Ho₃: There is no difference in the 2001 total math achievement levels of fourth-grade students in looping programs and those in traditional programs while controlling for initial (1999) and third-grade (2000) math differences.

Ho₄: There is no difference in the 2001 total battery achievement levels of fourth-grade students in looping programs and those in traditional programs while controlling for initial (1999) and third-grade (2000) battery differences.

Analysis of covariance (ANCOVA) was conducted to determine if significant differences existed between program designs after two years. Scores reported for fourth-grade students in the population were compared while controlling for prior achievement in 1999 and 2000. The four subtests targeted by the study were analyzed. The results of this analysis are presented in Table 4.

Table 4

Results of ANCOVA: Comparison of Adjusted Means for Students Completing Fourth-Grade Designs in 2001, Controlling for 1999 and 2000 Scores

<u>Subtest</u>	<u>Program Design</u>	<u>n</u>	<u>M</u>	<u>M (Adjusted)</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Total Reading	Traditional	201	52.36	54.66	18.04	7.40	.01*
	Looping	107	62.35	58.07	19.50		
Total Language	Traditional	201	57.08	59.60	20.99	2.19	.14
	Looping	107	66.19	61.83	21.30		
Total Math	Traditional	201	55.84	57.98	19.66	4.13	.04*
	Looping	107	64.97	60.86	19.47		
Total Battery	Traditional	201	55.12	57.56	17.56	5.37	.02*
	Looping	107	64.34	59.90	18.28		

*p < .05

As shown in Table 4, statistically significant differences occurred for three of the four subtests targeted by the study. After controlling for prior achievement levels, the student scores for Total Reading were significantly different ($F = 7.40, p = .01$). However, there was no significant difference detected for Total Language while controlling for prior achievement in the previous two years. Total Math scores showed a significant difference ($F = 4.13, p = .04$). The analysis comparing Total Battery showed a significant difference in the groups as well ($F = 5.37, p = .02$). The differences in comparing program designs are also demonstrated by the mean scores between the groups. Looping scores were higher than the scores for students in traditional designs in Total Reading ($M = 58.07$ vs. $M = 54.66$), Total Math ($M = 60.86$ vs. $M = 57.98$), and Total Battery ($M = 59.90$ vs. $M = 57.56$). Null hypotheses Ho_{4_1} , Ho_{4_3} and Ho_{4_4} were rejected. Null hypothesis Ho_{4_2} was retained, indicating that no significant difference between the means was detected in Total Language. At the end of the two-year period, the fourth graders in looping designs who had been with the same teacher for two consecutive years performed better on the *TerraNova* Standardized Assessment than students who had received instruction from two different teachers on all but one of the subtests targeted by the study after controlling for 1999 and 2000 differences.

Research Question # 5

Is there a significant difference between males and females for Total Reading, Total Language, Total Math, and Total Battery scores when controlling for prior achievement? One comparison was made at the end of third grade for the male and female populations. Analysis controlled for initial differences A second comparison was made at the end of fourth grade. The hypotheses associated with the first comparison were as follows:

Ho_{5_1} : There is no difference in the 2000 total reading achievement levels of male and female participants while controlling for initial (1999) total reading differences.

Ho5₂: There is no difference in the 2000 total language achievement levels of male and female participants while controlling for initial (1999) total language differences.

Ho5₃: There is no difference in the 2000 total math achievement levels of male and female participants while controlling for initial (1999) total math differences.

Ho5₄: There is no difference in the 2000 total battery achievement levels of male and female participants while controlling for initial (1999) total battery differences.

The first analysis of covariance (ANCOVA) was conducted using scores on the *TerraNova* Standardized Assessment at the end of the first year (third-grade scores for 2000) while controlling for prior achievement (scores for 1999 in second grade). Analysis for each of the four subtests targeted by the study and the findings are presented in Table 5.

Table 5

Results of ANCOVA: Comparison of Adjusted Means for Students Completing Third-Grade Designs in 2000 by Gender, Controlling for 1999 Scores

<u>Subtest</u>	<u>Gender</u>	<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>
Total Reading	Male	148	52.43	55.55	1.65	.20
	Female	160	58.79	57.54		
Total Language	Male	148	52.91	55.82	9.63	.00*
	Female	160	62.52	60.90		
Total Math	Male	148	59.63	59.77	.44	.51
	Female	160	60.09	60.98		
Total Battery	Male	148	54.97	57.01	5.16	.02*
	Female	160	60.53	59.68		

*p < .05

After the first year, there were no statistically significant differences between the means of the groups for Total Reading and Total Math. Statistically significant differences were detected between the means of the males and females for Total Language ($F = 9.63, p = .00$) and for Total Battery ($F = 5.16, p = .02$). The differences by gender are additionally demonstrated by higher mean scores by the female population. Female scores were significantly higher than male scores for both Total Language ($M = 60.90$ vs. $M = 55.82$) and Total Battery ($M = 59.68$ vs. $M = 57.01$). Null hypotheses H_{o5_2} and H_{o5_4} were rejected. Null hypotheses H_{o5_1} and H_{o5_3} were retained, indicating that no significant differences between the means were detected for Total Reading and Total Math. To trace the differences by gender in Total Language and Total Battery, a simple main effect analysis was conducted for the two subtests where there were significant differences in the male and female populations. The results of the simple main effect tests for Total Language are presented in Table 6.

Table 6

Results of Simple Main Effect Tests for Total Language 2000 by Gender, Controlling for 1999 Scores

<u>Quadrant</u>		<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>
Females						
Between Designs	Traditional	99	58.99	60.72	4.17	.04*
	Looping	61	68.25	65.44		
Males						
Between Designs	Traditional	102	50.95	51.97	1.72	.19
	Looping	46	57.24	54.98		

Table 6 (continued)

<u>Quadrant</u>		<u>n</u>	<u>M</u>	<u>M</u> (Adjusted)	<u>F</u>	<u>p</u>
Gender						
Within Traditional	Male	102	50.95	52.66	5.09	.03*
	Female	99	58.99	57.23		
Gender						
Within Looping	Male	46	57.24	60.45	5.35	.02*
	Female	61	68.25	65.82		

* $p < .05$

Three conditions were found for the significant differences by gender for the subtest in Total Language. There was a significant difference between the scores of females in looping designs and females in traditional designs ($F = 4.17, p = .04$). Females in looping designs had higher scores ($M = 65.44$) at the end of the first year than the females in traditional designs (60.72). There was also a significant difference between the males and females within the traditional designs ($F = 5.09, p = .03$). The females performed better ($M = 57.23$) than their male classmates in traditional designs ($M = 52.66$).

Finally, a statistically significant difference was noted for males and females within looping designs ($F = 5.35, p = .02$). Females obtained higher scores on Total Language ($M = 65.82$) than the males within the same looping designs ($M = 60.45$). All these significant differences combined to affect the differences between groups and within groups to yield the overall effect of higher female achievement among the groups. There was no significant difference detected between males in traditional designs and males in looping designs.

These same tests for simple main effects in the four quadrants were conducted to determine main effect for significant differences for Total Battery scores. The results are presented in Table 7.

Table 7
Results of Simple Main Effect Tests for Total Battery 2000 by Gender, Controlling for 1999 Scores

<u>Quadrant</u>		<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>
Females						
Between Designs	Traditional	99	56.64	58.10	15.23	.00*
	Looping	61	66.84	64.45		
Males						
Between Designs	Traditional	102	52.84	54.50	.80	.37
	Looping	46	59.67	56.00		
Gender						
Within Traditional	Male	102	52.84	54.46	.13	.72
	Female	99	56.64	54.93		
Gender						
Within Looping	Male	46	59.67	61.00	7.62	.01*
	Female	61	66.84	65.88		

* $p < .05$

Table 7 suggests two main effects that contributed to the differences in gender for Total Battery. There was a significant difference detected for females between looping and traditional designs ($F = 15.23, p = .00$). Females in looping designs scored significantly higher ($M = 64.45$) than females in traditional designs ($M = 58.10$). The second factor was identified through the analysis for a gender difference within the looping design. Analysis revealed a significant

difference between males and females in looping designs ($F = 7.62, p = .01$). Females had higher mean scores ($M = 65.88$) than their male classmates in looping designs ($M = 61.00$). Both effects, females between designs and females within looping designs, contributed to the gender difference detected for Total Battery scores. There was no significant difference found for males in traditional designs compared to males in looping designs. Likewise, there was no significant difference found for males in traditional designs compared to females in traditional designs.

The hypotheses associated with the comparison at the end of the two-year period were as follows:

Ho5₅: There is no difference in the 2001 total reading achievement levels of male and female participants while controlling for initial (1999) and third-grade (2000) reading differences.

Ho5₆: There is no difference in the 2001 total language achievement levels of male and female participants while controlling for initial (1999) and third-grade (2000) language differences.

Ho5₇: There is no difference in the 2001 total math achievement levels of male and female participants while controlling for initial (1999) and third-grade (2000) math differences.

Ho5₈: There is no difference in the 2001 total battery achievement levels of male and female participants while controlling for initial (1999) and third-grade (2000) battery differences.

An analysis of covariance (ANCOVA) was conducted for a second comparison by gender. Scores reported for the year 2001 were compared while controlling for prior achievement as indicated by 1999 and 2000 scores. At the end of the two-year period, comparisons were made to determine if there were significant differences within the groups and between the groups that were attributable to gender. Table 8 presents the results of the 2001 comparisons while controlling for 1999 and 2000 achievement levels.

Table 8

Results of ANCOVA: Comparison of Adjusted Means for Students Completing Fourth-Grade Designs by Gender, Controlling for 1999 and 2000 Scores

<u>Subtest</u>	<u>Gender</u>	<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>
Total Reading	Male	148	53.50	56.78	.47	.50
	Female	160	57.98	55.95		
Total Language	Male	148	56.03	61.25	.50	.48
	Female	160	64.14	60.17		
Total Math	Male	148	59.05	59.56	.04	.84
	Female	160	58.98	59.28		
Total Battery	Male	148	56.20	59.18	.84	.36
	Female	160	60.28	58.27		

At the end of the second year, there were no statistically significant differences by gender. Table 8 shows that males and females within and between looping designs and traditional designs showed no significant differences on any of the four subtests targeted by the study. Null hypotheses Ho5₅, Ho5₆, Ho5₇, and Ho5₈ were retained, indicating that no significant differences by gender were detected.

Research Question # 6

Are there significant interactions between gender and program design for Total Reading, Total Language, Total Math, and Total Battery scores while controlling for prior achievement? Interactions between gender and design were analyzed at the end of third grade and again at the

end of fourth grade. The hypotheses associated with the analysis at the end of third grade were as follows:

Ho6₁: There is no difference in the 2000 total reading achievement levels of third-grade students through interactions by gender and design while controlling for initial (1999) reading differences.

Ho6₂: There is no difference in the 2000 total language achievement levels of third-grade students through interactions by gender and design while controlling for initial (1999) language differences.

Ho6₃: There is no difference in the 2000 total math achievement levels of third-grade students through interactions by gender and design while controlling for initial (1999) math differences.

Ho6₄: There is no difference in the 2000 total battery achievement levels of third-grade students through interactions by gender and design while controlling for initial (1999) battery differences.

Analysis of covariance was used to address question six. Analyses for the four subtests targeted by the study were conducted to determine if there were significant interactions between program designs and gender. Scores on the *TerraNova* Standardized Assessment in 2000 were compared while controlling for prior achievement in 1999. Table 9 presents the results of the comparisons.

Table 9

Results of ANCOVA: Comparison of Adjusted Means for Students Completing Third-Grade Designs by Gender and Design, Controlling for 1999 Scores

<u>Subtest</u>		<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>
Total Reading	Traditional					
	Male	102	49.71	52.97	.12	.74
	Female	99	54.91	54.44		

Table 9 (continued)

<u>Subtest</u>		<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>
	Looping					
	Male	46	58.46	58.13		
	Female	61	65.08	60.63		
Total Language	Traditional					
	Male	102	50.95	54.25	.18	.68
	Female	99	58.99	58.65		
	Looping					
	Male	46	57.24	57.39		
	Female	61	68.25	63.15		
Total Math	Traditional					
	Male	102	57.82	59.83	5.78	.02*
	Female	99	55.84	56.62		
	Looping					
	Male	46	63.65	59.71		
	Female	61	67.00	65.34		
Total Battery	Traditional					
	Male	102	52.84	56.07	3.19	.08
	Female	99	56.64	56.65		
	Looping					
	Male	46	59.67	57.96		
	Female	61	66.84	62.71		

* $p < .05$

As shown by the results in Table 9, there were no statistically significant interactions between gender and program design for subtests in Total Reading, Total Language, and Total Battery scores at the end of third grade while controlling for prior achievement. However, there was a statistically significant difference found for math that was attributable to an interaction between program design and gender ($F = 5.78, p = .02$). Null hypotheses H_{061} , H_{062} , and H_{064}

were retained. Null hypothesis Ho₆₃ was rejected, indicating that there was a significant difference detected for Total Math. Simple main effect comparisons were made for the four quadrants. The results are presented in Table 10.

Table 10

Results of Simple Main Effect Tests for Total Math 2000 Interaction Between Program Design and Gender, Controlling for Prior Achievement

<u>Quadrant</u>		<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>
Females						
Between Designs	Traditional	99	55.84	56.66	14.82	.00*
	Looping	61	67.00	65.66		
Males						
Between Designs	Traditional		57.82	59.93	.11	.74
	Looping		63.65	58.98		
Gender						
Within Traditional	Male	102	57.82	58.43	2.17	.14
	Female	99	55.84	55.21		
Gender						
Within Looping	Male	46	63.65	62.38	3.72	.06
	Female	61	67.00	67.96		

*p < .05

As shown by the results in Table 10, there was one quadrant where a significant difference occurred. There was a statistically significant difference between female scores in traditional designs and those in looping designs ($F = 14.82, p = .00$). The females in the looping design had scores that were significantly higher ($M = 65.66$) than their female counterparts in traditional designs ($M = 56.66$). The results also indicate that there were no significant

differences detected for interactions between gender and program design for the other three quadrants. Males in traditional designs had mean scores comparable to males in looping designs. Males in traditional designs and looping designs had mean scores that were close in range to their female classmates within the same program design. The hypotheses associated with the analysis completed at the end of fourth grade were as follows:

Ho₆₅: There is no difference in the 2001 total reading achievement levels of fourth-grade students through interactions by gender and design while controlling for initial (1999) and third-grade (2000) reading differences.

Ho₆₆: There is no difference in the 2001 total language achievement levels of fourth-grade students through interactions by gender and design while controlling for initial (1999) and third-grade (2000) language differences.

Ho₆₇: There is no difference in the 2001 total math achievement levels of fourth-grade students through interactions by gender and design while controlling for initial (1999) and third-grade (2000) math differences.

Ho₆₈: There is no difference in the 2001 total battery achievement levels of fourth-grade students through interactions by gender and design while controlling for initial (1999) and third-grade (2000) battery differences.

Analysis of covariance (ANCOVA) was used to make a second set of comparisons to determine if there were interactions between program design and gender at the end of fourth grade. The scores in 2001 were compared while controlling for prior achievement (scores in 1999 and 2000). The results are presented in Table 11.

Table 11

Results of ANCOVA: Comparison of Adjusted Means of Students Completing Fourth-Grade Designs in 2001, Controlling for 1999 and 2000 Scores

<u>Subtest</u>		<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>					
Total Reading	Traditional	Male	102	50.61	55.05	.00	.96				
		Female	99	54.16	54.28						
	Looping	Male	46	59.91	58.52						
		Female	61	64.18	57.62						
		Total Language	Traditional	Male	102			52.58	58.32	5.97	.02*
				Female	99			61.72	60.87		
Looping	Male		46	63.67	64.18						
	Female		61	68.08	59.48						
	Total Math		Traditional	Male	102	56.58	58.73	.77	.38		
				Female	99	55.08	57.23				
Looping		Male	46	64.52	60.38						
		Female	61	65.31	61.33						
		Total Battery	Traditional	Male	102	53.28	57.44			1.38	.24
				Female	99	57.01	57.69				
Looping	Male		46	62.67	60.93						
	Female		61	65.59	58.86						

*p < .05

The results shown in Table 11 indicate one significant difference at the end of the two-year period attributable to an interaction between gender and program design. There was a statistically significant difference found in scores for Total Language ($F = 5.97, p = .02$). On subtests for Total Reading, Total Math, and Total Battery, no significant differences were found.

Hypotheses Ho6₅, Ho6₇, and Ho6₈ were retained, indicating that no significant differences were detected. Hypothesis Ho6₆ was rejected.

The significant difference in scores for Total Language was explored using simple main effect tests. The results are presented in Table 12.

Table 12

Results of Simple Main Effect Tests for Total Language 2001 by Gender and Program Design, Controlling for Prior Achievement

<u>Quadrant</u>		<u>n</u>	<u>M</u>	<u>M</u> <u>(Adjusted)</u>	<u>F</u>	<u>p</u>
Females						
Between Designs	Traditional	99	61.72	64.79	.65	.42
	Looping	61	68.08	63.09		
Males						
Between Designs	Traditional	102	52.58	54.14	8.13	.01*
	Looping	46	63.67	60.22		
Gender						
Within Traditional	Male	102	52.58	55.75	2.11	.15
	Female	99	61.72	58.45		
Gender						
Within Looping	Male	46	63.67	69.19	5.48	.02*
	Female	61	68.08	63.92		

* $p < .05$

The results presented in Table 12 indicate a significant difference in two of the quadrants. Males in looping designs and traditional designs were significantly different by comparison ($F = 8.13, p = .01$). Males in looping designs had significantly higher scores ($M = 60.22$) when compared to their male peers in traditional designs ($M = 54.14$) at the end of the two-year cycle. Males in looping designs also showed a significant difference from their female classmates in looping designs ($F = 5.48, p = .02$). The males again showed higher scores ($M = 69.19$) than the females ($M = 63.92$) within the same class design.

There were no significant differences detected for the other two quadrants. Scores for females in traditional designs were not significantly different from the scores made by females in looping designs. Additionally, there were no differences detected between male mean scores and female mean scores within the traditional designs.

Summary

Chapter 4 presented the analysis of data research. The findings of the study were addressed and presented in Tables that reported the results of statistical analysis for each of the research questions. Hypotheses were tested and either rejected or retained, as indicated by a preset alpha level of .05.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

The purpose of this study was to compare the academic achievement of students in looping programs from school systems in East Tennessee to their peers in traditional one-year instructional programs. The population included every third and fourth grade looping classroom in East Tennessee that completed a cycle in 2001 and their peers at those same schools who were there for both third and fourth grades in single-year traditional designs. *TerraNova* Comprehensive Test of Basic Skills (CTB/McGraw Hill, 1996) had been administered to all students. The study targeted four subtests (Total Reading, Total Language, Total Math, and Total Battery) that were used in the analytical procedures to make comparisons associated with program design, gender, and interactions between program design and gender.

Summary of Findings

The analysis centered on six research questions. The independent variables for this study were program designs and student gender. The scores reported for all students on the four subtests targeted by the study as measured by the *TerraNova* Standardized Assessment were examined as the primary dependent variable. The population consisted of 308 students. Six individual looping configurations comprised the multiyear population who had the same teacher for self-contained instruction for two consecutive years. The single-year traditional population was comprised of students who attended the same schools as the multiyear population. Those students had received instruction from 16 third-grade teachers and from 16 fourth-grade teachers in self-contained classrooms. The results are summarized.

Research Question # 1

What is the demographic profile of students in the population?

There were 308 students selected for the study. Among the looping classes, there were 107 students. They represented 34.7% of the study's population. Within the looping groups, there were 46 male and 61 female participants. Within the traditional classes, there were 201 students. They represented 65.3% of the total population. Within the traditional groups, there were 102 male and 99 female participants. For the groups combined there were 148 male and 160 female students who were selected for the study.

Research Question # 2

Are there initial differences in the achievement levels of students beginning third-grade looping programs and students beginning third grade in traditional programs for Total Reading, Total Language, Total Math, and Total Battery?

The results indicated that there were significant differences between the students in the two program designs upon entering third grade. The students entering the looping programs had achieved significantly higher scores in second grade (1999) than those students entering traditional designs. It was determined that the groups being compared were not equal in their academic levels when second-grade scores were used as measures of achievement.

Research Question # 3

Are there significant differences at the end of the first year between students in looping designs and those in traditional designs for Total Reading, Total Language, Total Math, and Total Battery while controlling for prior achievement (initial differences detected in 1999)?

As evidenced by the results at the end of the third-grade instructional period, significant differences in academic levels existed between students enrolled in the two program designs. Student scores differed on all four subtests that were analyzed. In every comparison that was

made, the student scores reported for the looping design were consistently higher than the scores reported for their same-grade peers enrolled in traditional designs. These results were obtained while controlling for the initial differences detected at the beginning of each program. The true effect of the looping phenomenon was more accurately assessed with the comparison of scores at the end of the looping cycle. Research Question # 4 addressed differences after two years.

Research Question # 4

Are there significant differences at the end of the two-year period (2001) between students in looping designs and those in traditional designs for Total Reading, Total Language, Total Math, and Total Battery scores while controlling for prior achievement (initial differences in 1999 and differences after the first year in 2000)?

The possible impact of looping remained strong at the end of the looping cycle. A comparison of student scores reported for 2001 found that students in looping designs had significantly higher scores than students in traditional designs for Total Reading, Total Math, and Total Battery. However, there was no detected difference between the groups for Total Language.

The findings reported here support similar results found by Hampton and his colleagues with the FAST Project (1997). They detected significant differences in a comparison of looping and nonlooping students achievement. In the two academic areas targeted by their study (reading and math), looping students had significantly higher mean scores when compared to randomly selected nonlooping students at their school and in comparison to randomly selected nonlooping students in the district.

The findings of Skinner (1998) seem to contradict the results of this study. When she compared the academic achievement of loopers and nonloopers in reading, math, and language, she detected a difference solely for language achievement. Several variations must be considered in comparing her study with this study. Her study did not include a comparison of

initial differences in the groups; this study did. Second-graders' scores were the only scores used by Skinner to create a database for comparison; this study analyzed second-, third-, and fourth-graders' scores to create a database for multiple comparisons. Scaled scores were used in her study; normal curve equivalents were used in this study because they are designed to calculate gains from one year to the next and can be treated arithmetically.

Yang (1997) conducted a comparative study of looping and nonlooping configurations at a school where third and fifth grades implemented looping as an instructional design option. His results indicated a difference in the fifth-grade groups for math applications and comprehension. A comparison of scores in subtests for reading vocabulary, comprehension, and math computation showed a difference in achievement levels for both third- and fifth-grade groups. In all instances, the looping students scored higher than nonlooping students. No analysis for statistical significance was conducted. Raw scores were recorded and simply subtracted to substantiate differences. Few similarities in Yang's study (1997) and this study existed that could be used to refute or support any findings.

Research Question # 5

Is there a significant difference between males and females for Total Reading, Total Language, Total Math, and Total Battery scores when controlling for prior achievement?

After the first year in each program design, the results showed there were no differences detected for Total Reading and Total Math that were attributable to gender. Total Language and Total Battery showed significant differences between male and female participants.

Three conditions were found for the significant difference by gender for the Total Language subtest. The first difference was detected for females between the two designs. Females in looping designs had higher scores at the end of third grade than females in traditional designs. A second difference was detected between males and females within traditional designs. Female participants had higher scores than their male classmates within the traditional

designs. A third difference occurred between males and females within looping designs. Females in looping designs had higher scores than their male classmates within the same looping designs. There was no significant difference between the two designs for male participants.

Performance variations by gender were also traced for the differences noted in Total Battery scores. Findings indicated that females in looping designs scored higher than females in traditional designs. The gender difference was further impacted by females who scored higher than their male classmates in looping designs. There were no significant differences found for males between the two designs or for male and female score results within the traditional design.

At the end of the second year, the results further described the effect by gender. No significant differences on any of the subtests targeted by the study were detected.

Research Question # 6

Are there significant interactions between gender and design for Total Reading, Total Language, Total Math, and Total Battery scores while controlling for prior achievement?

At the end of the first year in each design, the results showed no significant interactions between gender and design for Total Reading, Total Language, and Total Battery. There was a significant difference detected in students' scores for Total Math that was attributable to an interaction between gender and design. The primary condition was traced to a difference in female achievement levels between the two designs. The female population in looping designs had higher scores than the female population's scores in traditional designs.

At the end of the second year, the results showed a significant difference in the Total Language subtest that could be attributed to an interaction between gender and design. The male loopers scored higher than their male counterparts in traditional instructional designs. Looping males also scored higher than their female classmates in the same looping designs. As evidenced by the results, no significant differences for Total Reading, Total Math, and Total Battery were detected.

Conclusions

The study focused primarily on comparisons in academic achievement between students who received instruction in educational settings via two distinctly different instructional delivery designs. Students' scores were compared for differences between designs. Scores for male and female participants were compared in a secondary investigation without program design as a factor in the analysis. The final interest of the study explored the possible interaction between design and gender for looping and traditional program designs. Conclusions in those three major fields of inquiry were developed as a result of the data analysis and interpretation. Each of these is presented.

Conclusion # 1

Looping designs can have a positive effect on academic achievement for students. Remaining with the same teacher and classmates for two successive years may create attitudes among students that they belong to a group that is distinctly different from the traditional program design. Their associations with looping and what the design asserts as beneficial may promote a sense of obligation to perform in a way that fulfills the expectations. A self-fulfilling prophecy that seeks to confirm the positive characteristics attributed to the design may explain some of looping's success. In response to greater demands to show evidence of academic gains, schools may pilot a variety of looping designs to test its merits. A significant increase in standardized test scores for the first and second years may offer one incentive to implement the design in school systems that have only contemplated the prospects of offering looping as an option for parents, teachers, and students.

Conclusion # 2

Variations by gender favored the female participants after the first year of participation in each of the designs. Possible explanations may be explored to determine causes for this

phenomenon. Explanations may be traced to the difference in maturity levels of third-grade girls in comparison to boys at that age. Another possibility to be explored may be a strong desire by girls to please teachers and parents that exceeds or varies in comparison to the motivation boys have to excel academically at this age. Studies that focus on measuring the presence and strength of these factors could provide verification or contradiction of their impact on academic achievement. No significant differences in gender were detected at the end of the two-year cycle. Perhaps the strength of the previously suggested explanations fades by fourth grade. A balance in the female and male populations in maturation and motivation may occur some time during the fourth-grade experience.

Conclusion # 3

Insufficient evidence existed to suggest that either program design was more conducive than the other in yielding results that favor male or female participation. Students' scores on only one subtest at the end of third grade verified a significant difference due to an interaction between gender and design. This interaction showed that female participants in looping designs exhibited higher Total Math achievement. In second-year comparisons, male participants in looping classrooms obtained higher Total Language scores. The consistent application and reinforcement of language arts principles and skills by the same teacher may explain the difference detected in the second year. Looping may be viewed as a means of strengthening subject areas that have been generalized as presenting challenges to a particular gender. It has been debated that girls struggle with math, and boys have difficulty performing well in language arts. The results of this study refute both claims.

Recommendations for Practice

This study provided support to claims made by a number of practitioners who have suggested that looping can favorably impact academic achievement (George & Shewey, 1997;

Hampton et al., 1997; Lincoln, 1997; Simel, 1998). The following recommendations are offered to administrators, teachers, and parents who have a voice in implementing or participating in looping designs.

1. Looping should be considered as a viable alternative to the traditional single year, single grade design. This study focused on just one dimension of the program designs that were compared. The results proved favorable for looping's impact on academic achievement.
2. Plans to implement a looping design should consider the many benefits associated with looping classrooms that cannot be measured on standardized tests. Establishing long-term relationships through multiyear designs may result in greater dividends than higher test scores.
3. The decision to loop should be voluntary for teachers, students, and parents. Mandating looping can cause resistance and create negative feelings that nullify the benefits of looping. Mandating looping for all students eliminates the option of choice, an important benefit to offer parents. Offering a choice to everyone is one way to empower them and respect their views.
4. When planning and organizing a looping program, schools need to consider their particular staff, student population, parents, culture, and community. The success of a looping program depends on how effectively a school tailors its design for its beneficiaries. Schools must decide what is most suitable for their unique settings.

Recommendations for Further Research

A variety of looping designs have been implemented that incorporate individual interpretations of the looping philosophy. Opinions and strong feelings have been formed by participants and advocates. Opinions and equally strong feelings have been expressed by looping's critics. This combination of emerging practices and conflicting attitudes suggest rich ground for the cultivation of future research. In addition to exploratory studies, further research

that accurately describes or affirms the outcomes of multiyear designs is essential. The need for further research prompted the following recommendations:

1. Replications of this study that compare patterns of gain by students to determine if benefits are specific to a particular student profile.
2. Replications of this study that explore if there are variations in results by school.
3. Studies that compare two-year programs to three-year programs to determine if longevity affects results.
4. Studies that compare looping efficacy at various grade levels to determine if looping practices seem more suitable at particular grade levels.
5. Studies that compare teachers' results across several loops to identify patterns of gain and how consistent they remain.
6. Studies that correlate attendance records to designs to determine if attendance patterns affect program results.
7. Studies that compare mobility rates of students in looping and traditional designs to determine if movement within program designs affects results.
8. Studies that describe the long-term effects of looping by monitoring student progress over a period of years.
9. A larger study that compares male teachers and female teachers in looping designs to determine if there are variations by teacher gender.

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APPENDICES

APPENDIX A

Permission from School Districts

Vada S. Bogart
XXXX XXXXX XXXXXX
XXX XXXX
XXXXXX, TN XXXXX
August 31, 20001

XXXXXX XXXXXXXX
Director of Schools
XXX XXXX XXXXXXXX
XXXXXX, TN XXXX

Dear XXXXXX,

As a student at East Tennessee State University, I am currently involved in my dissertation phase of the Educational Leadership and Policy Analysis doctoral program. 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.

I would like your permission to access and utilize non-identifiable scores on the *TerraNova* from the years 1999,2000, and 2001 for the classrooms 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 of my study will be helpful in evaluating just one dimension of the success of these two programs within your school system. The results may also be helpful for those teachers or administrators who are considering the possibility of implementing a looping design.

Thank you for your cooperation.

Sincerely,

Vada S. Bogart

Permission is hereby granted to Vada S. Bogart to access and use *TerraNova* scores 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

Appendix B

Data Collection Form for NCEs

Identifying group: ___Looping ___Traditional Gender: ____ Results Years:_____
 Fictitious School:_____

Student #	2nd grade				3rd grade				4th grade				
	R	L	M	TB	R	L	M	TB	R	L	M	TB	
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													

Legend: M=Total Math, R=Total Reading, L=Total Language, TB=Total Battery

