2012

Examining the Transition Experience of Students from Multiage Elementary Programs to Single-Grade Classrooms at the Middle School

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ACKNOWLEDGEMENTS

The journey to complete this dissertation has been long and ultimately very rewarding, but were it not for the support, patience, and guidance of some very special individuals, this study may not have ever been completed. For all that they have given me, I am deeply grateful.

I would like to thank my dissertation chair, Dr. Brigid Schultz, for her support throughout this whole process. Her flexibility, steady encouragement, and thought-provoking conversations not only met my needs as a learner but pushed me to challenge myself. I would also like to thank committee member, Dr. David Ensminger, for his expertise in statistical analysis and guidance toward a research study that I could actually complete. I am also indebted to committee member, Dr. Beverly Kasper, for her insight and encouragement throughout this process. Thank you also to Dr. Barney Berlin, my advisor, who always challenged me as a student.

I would like to thank the principals, teachers, and office staff at my research site for their willingness to help me with this research study. Their efficiency and planning helped to make this process run smoothly. Without the students who participated in the study, none of this would have been possible. Thank you for your willingness to give of your time and for your candor and honesty.

Finally, I would like to thank my family and friends for all their love and support throughout these many years. I would like to especially thank my husband, Bill, for
always being there for me when I needed it with a strong shoulder to lean on, gentle words of encouragement, and never-ending faith in my abilities. Thank you for all that you sacrificed so that I would have time to work or just think. I am so lucky to have you in my life. Thank you to my friends for all of their support and encouragement, especially Robert Lupori, whose friendship has been my saving grace. Thank you to all the wonderfully supportive mentors that I have had throughout the years: Mary Ann Mullen-Teofilo, Mary Ellen Hodapp, Dr. Carl Harris, and Judy Giannamore. Lastly, thank you to my parents. Your love, support and faith in my abilities has meant so much to me.
For my beautiful boys, Teige, Brenn and Finn
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ABSTRACT

Multiage programming is a school reform option used throughout the United States. Much of the current literature focuses on the short-term benefits of multiage programs, particularly at the elementary level, with little consideration for long-term effects or for what might happen to students once they leave the multiage classroom and enter middle school. While there has been significant research that generalizes the transition experience of the general population of students, there has been limited research conducted on this transition experience for this specific population, the multiage elementary student.

The purpose of this simultaneous, mixed methods study was to provide an in-depth examination of the transition effects on students who transition from multiage elementary classrooms to traditional single-grade classrooms at the middle school. In this study, eight students who had previously attended multiage elementary classrooms were given the Piers-Harris 2 Children’s Self Concept Scale at three points, fall, winter, and spring during their first year in middle school to assess the students’ social and emotional well-being during the transition. Students were also administered a middle school transition questionnaire to identify what procedural, academic, or social issues were of concern to them. Students were interviewed about their transitional experiences.

In the analysis of the data showed that the students’ overall sense of self and self-esteem improved over the course of the transitional year. Student concerns with
procedures, academics, and social life decreased over the course of the year. The following major categories emerged from the interviews: (a) adjusting to the structure of middle school, (b) adjusting to new academic demands, (c) managing relationships with teachers and peers, and (d) changing sense of self. The findings have implications for middle level educators, multiage classroom elementary educators and for parents.
CHAPTER I
INTRODUCTION

Since the No Child Left Behind Act of 2001 was signed into law January 8, 2002 to ensure that every child in America receives a quality education, school districts across the country have spent considerable amounts of time, effort and money to develop the solutions that will lead to increases in student achievement. Every state and school district is responsible for ensuring that students meet state standards for proficiency in reading and math by 2014, and this adds much pressure to many school districts, some more than others, as already in 2007, 30% of schools are not making adequate yearly progress (AYP) (U.S. Department of Education, 2008).

Despite the fact that since the creation of the No Child Left Behind legislation 62% of the school districts in the United States have increased the amount of time spent in elementary schools on language arts and math instruction (Center on Education Policy, 2008), the achievement gap that the NCLB legislation has attempted to ameliorate is still a reality for the children in America’s schools. According to the Condition of Education Report 2008, the latest scores from the National Assessment of Educational Progress (NEAP) show that the achievement gap between White students and minority students remains significant. The achievement gap in reading between White and Black fourth graders was smaller in 2007 than any previous year’s assessment; however, the gap between White and Hispanic fourth graders was not measurably different in 2007 than it
was in 1992 (Planty et al., 2008). While it can be said that the gap is smaller, at the fourth grade level, Black students still score 27 points, on average, lower than White students, and Hispanic students score, on average, 26 points lower than White students (Planty et al., 2008). There was no measurable difference in the reading achievement gaps for 8th grade students in reading; Black students scored on average 27 points lower than White students, and Hispanic students scored, on average, 25 points lower than White students (Planty et al., 2008).

Similarly, the scores in mathematics show that a significant achievement gap still exists between White students and minority students. At the fourth grade level, the achievement gap between White and Black students was lower in 2007 than in 1990, but there has been no measurable change in the last two years (Planty et al., 2008). While there have been increases and decreases in the achievement gap between White and Hispanic students, the gap in 2007 is not significantly different than the gap in 1990 (Planty et al., 2008). A similar trend exists for both the White-Black and White-Hispanic score gaps at the eighth grade level; there has been a history of increases and decreases, but the current gap level is not measurably different than the gap that existed in 1990 (Planty et al., 2008). The White-Black mathematics gap for 8th graders was 32 points in 2007, and the White-Hispanic gap was 26 points (Planty et al., 2008). Further, in some states the disparity between state and NEAP results increased rather than decreased from 2002 to 2006 (Olson, 2007).

In addition to the charge of closing the achievement gap, schools are also faced with the challenge of implementing social and emotional learning (SEL) into the
curriculum. The affective domain of the educational experience is gaining more attention as recent research indicates that social and emotional learning has a positive impact on academic achievement for students. Indeed, it has been found that social and emotional learning improves academic attitudes such as motivation and commitment (Zins et al., 2004). In addition, behaviors such as attendance, study habits and cooperation improve; student performance improves with students demonstrating increases in grades, test scores, and subject mastery (Zins et al., 2004). A 2006 meta-analysis of 270 social and emotional learning programs found that SEL programs significantly improved students’ attachment and attitudes to school while decreasing rates of violence, substance use, and discipline referrals, behaviors which often interfere with a student’s ability to learn (Weissberg et al., 2006).

In response to the research, as a means to increase academic achievement and to meet the increasing demands of NCLB, a number of states and school districts have developed learning standards and benchmarks for social and emotional learning to which schools are held accountable, much in the same way that schools are accountable for subject area standards. In December 2004, Illinois was the first state to develop and implement social and emotional development standards as part of the learning standards for “the purpose of enhancing children’s school readiness and ability to achieve academic success” and “represent a landmark for policy making by defining specifically what children should know and do in the social and emotional realm” (CASEL, 2008). Similar standards have also been adopted in Alaska, New Jersey, and Wisconsin (CASEL, 2008). Thus, schools are faced with the challenge of not only increasing
academic achievement in order to close the achievement gap, but they must also attend to the development of students’ social and emotional learning. In turn, much pressure is then placed on schools to develop varied initiatives to address those demands.

With all the various initiatives and demands on schools, the “biggest problem facing schools is fragmentation and overload” (Fullan, 2001). Indeed, it is possible for one school to be juggling several improvement initiatives at one time. In a survey of schools in California and Texas, Hatch (2000) found that 66% of schools were managing 3 or more improvement programs and 22% of schools were managing 6 or more improvement programs. With so many initiatives, it is difficult to guarantee fidelity of implementation or the impact that the initiatives might have.

Despite the fact that schools are juggling a variety of initiatives in order to reform schools, the data shows that a significant achievement gap still exists. Thus, the changes that are occurring in schools to meet the NCLB requirements are not making a significant impact. If school districts are going to actualize real, lasting results with students, districts must dismiss quick fixes and multiple initiatives that are not coordinated to one another and focus on fixing the system (O’Neill, 2008). This is the “type of deep-level change needed if districts are going to move from wishful thinking to realizing the long-term vision of all students being proficient by 2014” (O’Neill, 2008).

While researchers call for the necessity of system wide reforms to meet the challenge of increasing academic achievement and promoting the social and emotional well-being of students, there are few examples of schools or districts actually heeding the advice; however, one school district in Colorado has begun the process of implementing a
district wide standards based model in which grade levels will be eliminated and students will be grouped based upon what they know, basing advancement upon proficiency of skills, not age. Students will no longer be given grades. There has yet to be such a large school system to attempt this type of reform.

The district, Adams 50, has 10,000 students in 21 schools, servicing students in grades K-12. Seventy-two percent of its students qualify for free or reduced lunch, two-thirds are Latino, and 38% are still learning English (Meyer, 2008). Faced with failing test scores, declining enrollment, and fewer than 60% percent of students graduating high school on time, the school district is seeking a drastic change (Meyer, 2008). The program is being piloted in select schools and classrooms, and it is anticipated that it will take three to five years to see a change in student achievement. The belief is that these pilots will prove successful, and full district implementation will begin in the next few years.

Adams 50 was inspired by the work that was done in 1994 in the Chugach School District, a small rural school district in south-central Alaska servicing 214 students who are scattered throughout 22,000 square miles, who implemented the system in an effort to better meet the needs of students when it was faced with only 10% of its students reading at grade level (Meyer, 2008). Recognizing that students all learn at different rates, traditional grade levels and grades were eliminated. Instead, students are given the opportunity to achieve standards at their own pace, regardless of age, through individualized learning plans. After the change, the district went from the 28th percentile in reading nationally to the 71st percentile. In response to the positive outcomes of the
reform in Chugach, the Gates Foundation gave the Chugach district $5 million dollars to help other school districts in Alaska to adopt the model (Meyer, 2008).

The reforms in Colorado and Alaska are just the more recent examples of school districts seeking systemic changes through the adoption of a nongraded or multiage model. Multiage programming exists in almost all fifty states, and states like Kentucky and Mississippi have mandated the implementation of multiage programming at specific grade levels (Stone, 1996). Containing students from two or three grade levels in a single classroom, the multiage classroom features a child-centered approach in which children receive curriculum and instruction “that addresses [their] physical, social, intellectual, emotional, and aesthetic needs” and “permits them to progress through an integrated curriculum at their own rate and pace” (Daniel & Terry, 1995).

Many studies have focused on the impact that multiage classrooms have on student achievement. Indeed, it has been shown that children in multiage classrooms fare as well as or better than their peers in single-grade classrooms on standard measures of achievement (Anderson & Pavan, 1993; Gutierrez & Slavin, 1992; Luvisi & Miller, 2001; Miller, 1990; Nye, 1995; Pavan, 1992). The second area that the research has focused upon is the effect that multiage classrooms have on the social-emotional development of children. Students in multiage classrooms are better behaved (Elder, Clawson, & Howard, 1996), develop lasting friendships (McClellan & Kinsey, 1999), and demonstrate more positive prosocial behaviors than their peers in single-grade classrooms (McClellan & Kinsey, 1999). Thus, multiage programming represents the exact type of systems reform that addresses both social and emotional learning as well as
leads to increases in academic achievement. If the research continues to show positive effects for students, then researchers must begin taking a hard look at how such a reform system can impact the existing educational systems in place.

Much of the current literature focuses on the short-term benefits of multiage programs, particularly at the elementary level, with little consideration for long-term effects or for what might happen to students once they leave the multiage classroom. Since an extremely limited number of middle schools offer multiage programming, by the time children in elementary multiage programs reach sixth or seventh grade, they will be expected to continue their schooling in traditional graded classrooms. Thus, educators must consider how the change to one system can impact another system. What happens to these students as they make the transition to the single-grade classroom? A better understanding of the effects, if any, this transition has on students needs to be researched.

**Purpose of the Study**

The educational career of the majority of children is filled with a variety of transitions, with the major transitions occurring when children move from elementary to middle school and from middle school to high school. A number of other transitions occur when a child moves from grade to grade, transitioning to a new teacher every year. Some of the transitions are known to be more traumatic than others. It is well documented that the transition to middle school from elementary school has a negative impact on students (Anderman & Midgley, 1996; Elias, Ubriaco, Reese, Gara, Rothbaum, & Haviland, 1992; Harter, 1981; Hirsch & Rapkin, 1987). Students experience the largest decline of their perceptions of the quality of school life during the transition to a middle
level school (Schumacher, 1998). Motivation and attitudes towards school tends to
decline during the transition (Anderman & Midgley, 1996; Harter, 1981) and this decline
occurs regardless of academic ability (Elías et al., 1992; Hirsch & Rapkin, 1987). Poorer
academic performance also occurs during this transitional period (Anderman & Midgley,
1996; Felner, Ginter, & Primavera, 1982, cited by Diemert, 1992). Much of the decline
is attributed to the social, emotional, and physical changes that occur at the same time as
the transition to middle school; the change in academic instruction and expectations at the
middle level also contributes to the decline.

Little is known, however, about the transitional experience of students who move
from multiage elementary programs to traditional graded middle schools. While there
has been significant research that generalizes the transition experience of the general
population of students, there has been limited research conducted on this transition
experience for this specific population, the multiage elementary student. The research
that has been conducted on this group’s transitional experience has been hampered by the
fact that some of the research was not conducted during the actual transitional year, but
rather years after the transition has been made. Further, some of students selected for the
studies had only been in the multiage program for a short period of time prior to the
transition, less than two years, and in some cases only one year, such that it cannot be
clearly determined if the time spent in the multiage classroom was a factor in their
transitional experience. Lastly, the research that has been conducted on the transition to
middle school for multiage elementary students utilized very small population samples,
making it difficult to generalize the results.
In addition, the research that has been conducted on the transition experience of multiage students has been strictly qualitative in nature. Indeed, the collection of quantitative data, specifically utilizing established standardized measurement instruments, on the transitional experience of multiage elementary students has much to offer the field, since no data of this type exists. Moreover, the qualitative data that has been previously collected is deficient in nature and flawed in its design and selection of participants. Thus, there is need for more qualitative data to be collected. The collection of both types of data using a mixed-method research design utilizes multiple data collection methods to yield the best understanding of the transitional experiences of multiage elementary students to single-grade classrooms at the middle school.

The purpose of this simultaneous, mixed methods study was to provide an in-depth examination of the transition effects on students who transition from multiage elementary classrooms to traditional single-grade classrooms at the middle school. Through a series of questionnaires, standardized measurement instruments, and interviews, the researcher sought to determine the perceptions of students on the transition process and its impact for students moving from a fifth/sixth grade multiage classroom to a 7th grade single-grade classroom. Quantitative research questions addressed the impact that the transition had on specific affective domains. Data was yielded from the Piers Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) and a middle school transition questionnaire. Additional questions on the middle school questionnaire addressed student concerns with procedures and rules as well as academics during the transition. To further explore how the students manage the
transition, interviews were conducted to yield qualitative data. The reason for following up with qualitative research was to explain the quantitative results with more depth. The research began during the fall of the students’ seventh grade year and continued throughout the school year so as to fully examine the effects of the transition as the students were experiencing it.

**Significance of the Study**

This study has significance for both educators and parents. By examining the transition effects, teachers and administrators of multiage programs can learn how to best prepare children for the transition. Further, middle level teachers and administrators who service children from multiage programs can design specific programs for the transition for this group of students. Appropriate staff development for teachers with regard to how best guide the multiage elementary student through the transitional experience can be developed.

In addition, in my past experience as a middle level educator in a district that offered multiage classrooms at the elementary level, it was not uncommon for parents of students who were previously enrolled in the district’s multiage elementary program to ask that the multiage program extend into the middle school. This study will provide educators and administrators with information about the current multiage program at the elementary level; this is particularly significant for the district in which the research was conducted as they are expanding the multiage classroom model to other schools in the district. It will also provide educators and administrators with information as to whether
or not it is worth pursuing of the idea of offering multiage classrooms at the middle school level, like the K-8 multiage model that exists at one school in the research district.

Typically, multiage programs are programs of choice where parents, knowing the positive impact of such programming can have on their children, choose to enroll their children in multiage classrooms. Knowing about the transition effects at the end of their students’ multiage education career would help parents make fully informed educational decisions for their children.

**Research Questions**

The overarching question of the study was: What is the experience of students form multiage elementary classrooms when they transition to single-grade classrooms at the middle school? To answer this question, the researcher addressed the following sub questions:

1. What are the changes in the nature of student self-concept and self-esteem as measured by Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) for multiage elementary students during the transition to middle school?
2. How do students from multiage elementary classrooms manage the transition?
3. How do students from multiage elementary classrooms manage the academic differences of middle school?
Definition of Terms

The following terms have been defined for the purposes of providing clarity in the study. Those definitions that do not include a citation have been defined by the researcher in the context of this study.

**Developmentally appropriate practice:** Refers to the practice of providing curriculum and instruction “that addresses the physical, social, intellectual, emotional, and aesthetic needs” of the learners and “permits them to progress through an integrated curriculum at their own rate and pace” (Daniel & Terry, 1995).

**Multiage Class:** Miller (1996) provides a concise definition of multiage grouping, simply stating that multiage grouping is “two or more grade levels that have been intentionally blended together to improve learning” (p. 12).

**Multigrade Class:** A combination class where a teacher instructs two or more grade levels within grade specific curriculum.

**Single-grade Class:** A class composed entirely of students from one-grade level.

**Nongraded:** A system in which children are not expected to meet predetermined benchmarks nor are curriculum and tasks assigned to specific years of school. Children are expected to have continuous progress at their own rate, not having to accelerate or decelerate progress based upon the needs of their peers (Goodlad & Anderson, 1959).

**Looping:** In this arrangement, “students from a single grade-level group stay intact and remain with their class or team of teachers for several consecutive years” (McLaughlin & Doda, 1997, p. 61).
**Transition:** A “change in grade level, moving from one school building to another and experiencing developmental changes physically, socially, intellectually, psychologically, and emotionally” (Kindle, 2000).

**Joplin Plan:** Cecil Floyd the assistant superintendent of schools in Joplin, Missouri created a program that implemented aspects of nongraded education (Carson & Thompson, 1964). Under his direction, students were grouped by grade in heterogeneous groups for the majority of the school day; however, reading instruction was conducted differently. For reading, students were grouped across grades based upon ability.

**Open education:** A schooling system started in Britain after World War II in which classrooms contained no whole-class lessons, no standardized tests, and no detailed curriculum. Children were expected to learn through discovery and by experiencing a variety of activities based upon individual interest and readiness (Cuban, 2004).

**Academics:** In the context of describing the middle school transitional experience, the researcher collected data about academics. The term is broad and covers the spectrum of experiences that students encounter with regard to grades, the work that is given to students, and the academic structures of middle school to include: multiple teachers, getting additional help from teachers, and the materials and resources used in instruction.

**Procedures:** In the context of describing the middle school transitional experience, the researcher collected data about procedures. The term is broad and covers the spectrum of experiences that students encounter with regard to the rules and
procedures that govern the middle school. Changing classes, going to lockers, and managing the transition from class to class to include: keeping track of materials and managing ones time, are considered middle school procedural issues.

**Social Life:** In the context of describing the middle school transitional experience, the researcher collected data about the students’ social life experiences. The term is broad and covers the spectrum of experiences that students encounter with regard to their relationships with teachers and peers. Social life issues include: bullying, being in class with friends, making new friends, and having a teacher to talk to about problems.

**Limitations**

There were a number of limitations involved in this study. To begin, the sample size utilized in this study was small. The study was limited to one school district and only one elementary school with a multiage program. These conditions affected the generalizability of the study.

Further, there are a variety of methods of implementing multiage classrooms, with varying grade level structuring, curriculum and instructional methods. The school used in the study, represents one of the many ways of structuring multiage classrooms. This, too, affected the generalizability of the study.

Another limitation of the study was that in the district, parents are able to select between the multiple elementary schools provided that there is space available through a school choice program in the district. Thus, the participants in the multiage classroom chose to be part of the school. Some of the parents of the students in the multiage classroom selected the school and the classroom arrangement. Teachers applied to work
in the program. For this reason, the multiage student population used in the study may not be entirely representative of the district.
CHAPTER II

REVIEW OF THE LITERATURE

Defining Multiage Education

Greek mythology tells us of the cruel robber, Procrustes….When travelers sought his house for shelter, they were tied onto an iron bedstead. If the traveler was shorter than the bed, Procrustes stretched him out until he was the same length as the bed. If he was longer, his limbs were chopped off to make him fit. Procrustes shaped both short and tall until they were equally long and equally dead. Certain time honored practices of pupil classification, while perhaps not lethal, trap school-age travelers in much the same fashion as Procrustes’ bed trapped the unwary. These practices are the concomitants of our graded system of school organization. (Goodland & Anderson, 1959, p. 1)

In this manner, in a graded education system a certain amount of content and progress is expected to be covered in a year. This content is then assigned a specific grade in which it is supposed to be taught. The children who cannot master the content as quickly are pushed and “stretched” to conform to the grade standards. Those students who have the ability to master it quickly are slowed and restricted, their growth “cut off” as they wait for the rest of the class to master the material.

It is exactly this “Procrustean” system of education that Goodlad and Anderson (1959) describe that supporters of multiage education have worked to reform by creating alternative methods of educating children that is not based upon strict grade level guidelines. As educators have experimented with different methods of grouping children and providing more individualized instruction, a multitude of arrangements and
philosophies have developed, all with the same purpose of recognizing the unique individual needs of students when educating them. Thus, multiage education practices have been called by a variety of names such as nongraded education, mixed-age grouping, multi-grade education, heterogeneous grouping, vertical grouping, open education, and “family” grouping. Over time, practices have become more cohesive and the terminology more definitive such that multiage education is the predominant term used today; however, given the appearance of these previously mentioned terms in the research and literature it is necessary to clearly define these terms.

In 1959 Goodlad and Anderson defined nongraded education as a “system of organization and nothing more” and it is “no panacea for problems of curriculum and instruction” (p. 59). Rather than being strict and prescriptive in their plan for nongraded education, Goodlad and Anderson believed that simply changing the graded education system to a nongraded system would allow teachers to see the possibility for educating children. In defining the organization of a nongraded system, Goodlad and Anderson created three determining criteria. First, the system must provide a single learning continuum through which children progress. Children are not expected to meet predetermined benchmarks nor are curriculum and tasks assigned to specific years of school. Second, children are expected to have continuous progress at their own rate, not having to accelerate or decelerate progress based upon the needs of their peers. Third, the system encourages flexible grouping of children, such that children are not locked into specific groups, but rather move in and out groups as necessitated by the ability of the individual student (Goodlad & Anderson, 1959). Thus, the students in a nongraded
program are not given any kind of grade level labels or designations. The practice of nongraded education is most commonly found today at the primary level.

Soon after Goodlad and Anderson (1987) began introducing nongraded education to America’s educators, the open education movement, which started in Britain after World War II, began to gain popularity with American educators. American schools began to adopt the model in the late 1960’s and early 1970’s. Called the open education model, it implemented restructuring of the traditional classrooms as well as a complete change in the delivery of curriculum to students. Within open education, classrooms contained no whole-class lessons, no standardized tests, and no detailed curriculum. Children were expected to learn through discovery and by experiencing a variety of activities based upon individual interest and readiness (Cuban, 2004). Children were guided to learn at their own pace with the help of the teacher. Teachers structured the classroom and activities for individual students and small work groups. As there was some overlap in the philosophies and practices, the two movements were considered by some to be almost synonymous. Subsequently, “the word ‘open’ came to be used in the same way that the less attractive word ‘nongraded’ had been” (Goodlad & Anderson, 1987) and schools began implementing nongraded programs and calling them open classrooms and vice versa. When comparing later studies on open education and their earlier work on nongraded education, Goodlad & Anderson, concluded that there was no differences between nongraded and open education (1987).

“Those unfamiliar with the term nongraded often assume it refers to the practice of not giving letter grades” (Gaustad, 1992). It is perhaps for this very reason that the
term has fallen out of favor, and was replaced by a term that the public seemed to more readily understand. Starting in the 1990’s, nongraded education began to be referred to more commonly as multiage education. During the 1960’s and 1970’s in Great Britain multiage grouping was known as “vertical” or “family” grouping (McLaughlin & Doda, 1997). Within a multiage educational setting, classrooms or groups of children are sometimes still referred to as “families.” This stems partially from the idea that the earliest form of multiage education was the education that took place in homes amongst families. Mothers and fathers instructed children of all ages to work and learn together for the benefit of the family and the community (Stone, 1996). Further, the concept stems from the idea that by placing children in groups who remain together for several years with the same teacher, along with promoting a sense of community through cooperative learning and shared leadership that a sense of “family” will develop. Indeed, in some cases in the multiage setting, the same groups of children remain together for the duration of their elementary careers, with children and their parents developing long-term relationships.

Multiage education differs “slightly from…nongraded grouping…which does not differentiate between different grade levels and allows for students’ continuous progress through the curriculum” (McLaughlin & Doda, 1997). There are numerous definitions of multiage education that exist today. According to Stone (1996), a multiage classroom is a:

mixed-age group of children that stays with the same teacher for several years. The children are randomly selected and balanced by age, ability, and gender. This grouping, deliberately for the benefit of children, not for
reasons of economics, curriculum, or convenience, comprises much more than school classmates, evolving instead into a true family of learners….Every child in the “family” can become a successful learner on his own continuum of growth. (vii)

In this manner, students of different grade levels interact across age groups, developing long-term relationships with each other as well as the teacher. Miller (1996) provides a more concise definition of multiage grouping, simply stating that multiage grouping is “two or more grade levels that have been intentionally blended together to improve learning” (p. 12).

There are a few terms with which multiage education is often associated, but are not true to the philosophy or design of program. A multiage classroom is not a combination class where a teacher instructs two or more grade levels within grade specific curriculum. This is often called a split-grade, mixed-grade or combined grade class. The development of these classes is usually in response to imbalances in student-teacher ratios, enrollment or budget constraints, created due to administrative need rather than due to educational philosophy (Craig & McLellan 1987, cited by Cotton, 1997).

Looping is another concept that is often confused with multiage education. In this arrangement, “students from a single grade-level group stay intact and remain with their class or team of teachers for several consecutive years” (McLaughlin & Doda, 1997, p. 61). The focus of this concept is on developing long-term relationships and providing consistency and familiarity to instruction and students do not experience mixed-age grouping. This model has also been called student-teacher progression (STP) (McLaughlin & Doda, 1997).
In researching multiage education, it is important to recognize as well as clarify the terminology to which researchers and educators have used when studying programs. For the purposes of the researcher, the term multiage education, whenever appropriate, will be the primary term used. For purposes of the simplicity, the researcher will utilize Miller’s (1996) definition of multiage education.

**History of Multiage Education**

In the early years of American education, starting with the founding of the first public school in America in 1635, the majority of children were educated in one-room schoolhouses where children of a variety of ages were educated together. This system was changed after Horace Mann, Secretary of the Massachusetts Board of Education, visited Prussia in 1843. After the Prussian failure to defeat Napoleon in 1806, Germany embarked upon a reform campaign to restore pride and power to the defeated nation, turning its attention to the education system, in particularly that of the common people, hoping to provide a systematic way of not only producing a unified Germany but an obedient, trained citizenry (O’Connell, 1998). Hearing of Germany’s success, Mann, along with other influential men such as Barnas Sears, who would succeed Mann as Secretary of the Massachusetts Board of Education and Calvin Stowe, a professor of classics and religion, visited Prussia to learn more about the progressive, efficient, graded system that was being implemented (O’Connell, 1998).

Mann’s experiences in Prussia would prove to have a significant impact on the structure of America’s schools. School and local administrators saw Mann’s ideas as being compatible with those of a successful manufacturing practice (Pratt, 1986) and
legislation soon followed that created standardized ages of entry to schools and the establishment of graded classrooms and accompanying curricula. Of particular import was Edward Everett, Governor of Massachusetts, a man who had earned America’s first Ph.D. after studying in Prussia. Everett was faced with growing number of poor, mainly Irish Catholic immigrants that he believed needed training and control (O’Connell, 1998). The first step in reforming Massachusetts schools occurred in 1848 when the Quincy Grammar School in Boston became the first graded school in America. Working in collaboration with Mann, the Prussian system of education was then adopted in the state of Massachusetts in 1852. Shortly after this reform change in Massachusetts, the governor of New York adopted the Prussian system in twelve New York schools on a trial basis. Within two weeks, the governor declared the trial a success and adopted the system for the entire state of New York (O’Connell, 1998).

The establishment of graded textbooks would support and fuel the graded education movement in America’s schools. In 1836 the McGuffey Eclectic Reader was introduced and it featured six graded levels of readers that became widely accepted in America’s schools (Buffie, 1971). Capitalizing on the popularity of leveled books, others sought to develop graded textbooks for reading and arithmetic which soon became commonly used. Teacher training then centered on the use of these books, thereby creating the designation of teaching certain skills to specific groups of children based on age.

The establishment of graded schools appeared to some to be a quick and efficient answer to the problem of how to best educate the growing number of children in
America’s schools. This system was not without its problems, though, and small pockets of educators called for a rethinking of this highly rigid system. With the implementation of the graded system, the increasing number of student failures concerned educators. In the 1920’s the rate of student failure soared with large cities in the eastern portion of the United States reporting rates of failure for first grade students as high as 40 percent (Otto & Estes, cited by Buffie, 1971). In order to lessen the numbers of student failures, attempts were made by school districts to increase the number of promotions during the school year, hoping to give students multiple opportunities to pass grade levels throughout the school year. The Elizabeth Plan in New Jersey and the St. Louis Plan in Missouri offered promotions for students up to four times a year, but it is not clear the efforts had in any significant impact in their local schools, and they certainly did little to influence reform on the national level (Buffie, 1971).

Not only was failure a concern for educators, but the rigidity of student progress within the graded school structure was an issue. The pace at which students progressed through school was not based upon the needs of students; thus, some students lagged behind while others were able to successfully complete the curriculum well before the end of the year. As a result, schools began experimenting with grouping children based upon ability. In 1895 the Cambridge Plan in Massachusetts created a double-track system in which elementary students were placed in a regular track which took six years to complete and brighter students were placed in an accelerated track which took only four years to complete (Buffie, 1971). Schools in Oregon, New York, Colorado, and California also experimented with varying models of student ability grouping. Such
programs laid the foundation for programs that still exist today such as remedial reading and gifted enrichment, and educators began thinking more about the needs of students when designing instruction.

The first American educator to lead the reform movement against the graded school system and call for a system of complete individual student progress was Preston W. Search, a superintendent of schools in Pueblo, Colorado from 1888 to 1894 (Buffie, 1971). His efforts, which became known as the Pueblo Plan, brought about the first real change at the high school level. Under Search’s direction, each high school subject was developed in a manner in which students could progress in each subject at his own pace. All units were studied by every student, but the rate of study depended upon the needs of the individual student. Further, grades were eliminated; instead, teachers recorded the number of units successfully completed. The idea of nonpromotion was eliminated as well (Buffie, 1971). When Search became a superintendent in Los Angeles in 1895, he implemented the plan there as well. This would lead to the creation of similar plans such as the Dalton Plan in Massachusetts and the Winnetka Plan in Illinois where individual student needs would drive the instruction.

With the development of these reforms across the country, America’s schools were inching ever closer to the development of nongraded schools, which would first appear in 1934 in Western Springs, Illinois. Under the name of the Flexible Progress Plan, grades one, two, and three were eliminated, and by 1937 the intermediates grades would be eliminated as well (Buffie, 1971). The Continuous Progress Plan was developed in 1939 in the College Avenue School in Athens, Georgia, a plan that eliminated grades
at the primary level. It was not until 1942, though, that a plan with lasting impact would be developed. Under the direction of Lowell P. Goodrich, an educator who had done experimental work with nongraded schools in Fond du Lac, Wisconsin, the Milwaukee School District introduced nongraded primary education. By 1955, Milwaukee would have seventy-eight schools using the nongraded system, a system that would remain in Milwaukee’s elementary schools until well into 1970’s (Buffie, 1971).

The 1950’s represented a time of great change in American education. Immediately, after WWII, the reform movement in nongraded education slowed. As Americans became less rural, the one-room school house, an institution that had always promoted nongraded education, faced a losing battle as the 1950’s ushered in development of the suburban lifestyle with returning soldiers settling down and starting families in newly developed suburban neighborhoods (Pratt, 1986). This is evidenced by the fact that in 1918 the age range in American Grade 9 classrooms was 14.1 months and in 1952 it was 8.6 months (Pratt, 1986). In 1918, there were 196,037 one-room schools, representing 70.8% of all public schools in the United States. This number changed dramatically by 1980 to less than 1,000 of these schools remaining (Muse, Smith, & Barker, cited by Miller, 1990). At the same time, experimentation with nongraded education slowed in urban and suburban schools as Americans adjusted to the post-war period.

The late 1950’s and early 1960’s was marked by a time of divisiveness with regard to how to best reform America’s schools. The launching of Sputnik in 1957 was America’s call to action. Faced with failure and desire to assert its dominance on the
world scene, America viewed its schools as in need of restructuring. It was believed that “harder” subjects such as math and science should be emphasized, and many called for the return of the “back to basics” education of old. This movement was largely supported by school boards and politicians (Goodlad & Anderson, 1987). In striking contrast to this movement, researchers and educators had different ideas for what would best serve the needs of America’s children. Educators were quick to adopt new programs and reforms in an effort to assuage the critics of America’s schooling.

One such program that was well received after educators were sparked by Sputnik was the Joplin Plan. In 1954, Cecil Floyd the assistant superintendent of schools in Joplin, Missouri created a program that implemented aspects of nongraded education (Carson & Thompson, 1964). Under his direction, students were grouped by grade in heterogeneous groups for the majority of the school day; however, reading instruction was conducted differently. For reading, students were grouped across grades based upon ability, such that a reading group might include high-ability third graders, average ability fourth graders, and low-ability fifth graders. The plan received national attention after the *Saturday Evening Post* ran an article about the program in 1957 and *Reader’s Digest* ran a condensed version of the same article in 1958 (Powell, 1964), which inspired many schools to adopt the program and later develop the same type of grouping strategies for teaching mathematics. At the time the program had no objective proof for the success claims that it made. With the publication it became a “name” and “about all it had to offer was sudden popularity” (p. 387). In subsequent years, it was found that such grouping placed students in reading groups where success was possible and teachers were
stimulated to perform better in terms of reading instruction (Cushenberry, 1967). The Joplin Plan is still in use today. In 1987 the Success for All Foundation, which uses the Joplin model for reading groups, was established as a “nonprofit organization dedicated to the development, evaluation, and dissemination of proven reform models for preschool, elementary, and middle schools, especially those serving many children placed at risk” (Success for All, 2007). As of the 2003-2004 school year, Success for All Foundation programs were being “implemented in more than 1300 schools in over 500 districts in 48 states in all parts of the United States, Guam, and the Virgin Islands. Versions of the model are also used in other countries, including England, Israel, Canada, Mexico, and Australia” (Success for All, 2007) with great success.

Adding to excitement brought about by the Joplin Plan, The Nongraded School written by Goodlad and Anderson in 1959, revised in 1963, began the major shift in thinking away from the system of graded classrooms, and represented a renewed interest in nongraded schools. Goodlad’s idea of a nongraded school stemmed from his early experiences as a teacher in a Canadian one-room school. There students sat in rows by grade. One of Goodlad’s students sat in misery by the window, isolated from the rest of the class, struggling with a learning disability which caused him to have successive failures and the inability to be assigned to sit in a grade level row. Seeking an alternative to the stigmatizing and limiting practices of graded schooling that he witnessed, he worked with Anderson, a Harvard professor, to develop an alternative system of educating children that was more child-centered. The body of educational research developed by this time was sufficient enough to demonstrate that past practices...
discriminated against the least able students and the most competent students and was not compatible with the recent research in cognitive development of children. Thus, a “back to basics” reform would only work against the goals that reformers had for reaching high educational standards, and thus, alternatives such as the one proposed by Goodlad and Anderson were well received by educators. The book was not only a call to action to educators, but it laid out a plan of action for schools to follow for the implementation of a nongraded school.

The book served as a segue to the 1960’s and the 1970’s, a time when there was a high interest in the nongraded classroom (Pavan, 1992), largely due to an interest in developmental theories of learning, a large influx of federal money, and student-centered models of instruction (Miller, 1990). It is estimated that in 1961, 6.3 percent of all urban school districts were using some form of nongraded primary education (National Education Association Research Division cited by Buffie, 1971). Moreover, schools during this time period were faced with the concerns of racial integration, better use of available facilities, and dissatisfaction with traditional models of schooling, particularly the junior high model (Buffie, 1971). Junior high and senior high school leaders began to look at elementary models for solutions to the problems, where the nongraded philosophy had already made some inroads. Brown’s book, *The Nongraded High School*, published in 1963 was the first book to discuss nongraded education at the high school level, and it was highly received (Buffie, 1971). Nongradedness was now more than just a philosophy or an experiment, it now had specific guides and model schools that other schools at all levels could follow.
The open education movement, which started in Britain after World War II, gained popularity in the late 1960’s and early 1970’s and somewhat diverted the attention of educators from the nongraded movement (Goodlad & Anderson, 1987). Within the open education model, classrooms contained no whole-class lessons, no standardized tests, and no detailed curriculum. Children were expected to learn through discovery and by experiencing a variety of activities based upon individual interest and readiness. Children were guided to learn at their own pace with the help of the teacher. Teachers structured the classroom and activities for individual students and small work groups. As there was some overlap in the philosophies and practices, the two movements were considered by some to be almost synonymous. As a result, “the word ‘open’ came to be used in the same way that the less attractive word ‘nongraded’ had been” (Goodlad & Anderson, 1987) and schools began implementing nongraded programs and calling them open classrooms and vice versa.

In 1975, a major step towards the implementation of nongraded practices appeared in the form of a federal law, Public Law 94-142, more commonly known as The Education for All Handicapped Children Act, which established that each child must be provided an education based upon his or her individual needs. While the law was designed to meet the unique needs of children with disabilities, it opened the door to the possibility that all children, whether placed in regular education or special education, should be treated as unique individuals. Special education teachers were then trained to provide instruction in a nongraded manner. Goodlad and Anderson (1987) believe that the special education teachers were then able to influence the practices of regular
education teachers by showing that such practices could not only be possible but effective for all children.

Goodlad’s and Anderson’s book was revised again in 1987, which marked a new period of interest in nongraded education (Pavan, 1992) which began in the early 1990’s. Several states began utilizing multiage programs to improve educational opportunities for elementary students. For example, The Kentucky Education Reform Acts (KERA) was enacted in 1990, which stemmed from a 1985 lawsuit in which sixty-six superintendents filed suit against the Commonwealth of Kentucky, citing unequal educational opportunities for the poorest students in the state (Luvisi & Miller, 2001). The educational system was ruled unconstitutional by the Kentucky Supreme Court in 1989 and a task force was developed to create a new system in which schools would perform at a high level and be more accountable (Luvisi & Miller, 2001). The resulting plan called for the implementation of nongraded primary programs in kindergarten through third grade. The hope was that the new system would be one that ensured that each child could progress at his or her own rate. Students would not be retained, but rather progress at their own pace and level of readiness (Luvisi & Miller, 2001). The plan for implementation was to begin in 1992 and be completed by 1996 (Stone, 1996), with several schools piloting multiage programs which were based upon programs in place at schools observed in Ohio and British Columbia that had implemented nongraded programs following the designs of Goodlad and Anderson (Luvisi & Miller, 2001). In 2000, 75 percent of the elementary schools in Kentucky used mixed-age grouping
strategies, particularly at the primary level (Kentucky Board of Education cited by Pardini, 2005).

Other states followed the example established by Kentucky. Both Florida and Louisiana called for plans to be developed for the implementation of multiage programs (Stone, 1996). In Mississippi, the state legislature mandated in 1990 that elementary multiage classrooms be phased into the educational system. In addition, the Oregon legislature passed the Oregon Educational Act for the 21st Century in 1991 which called for the restructuring of the Oregon school system and the creation of a model for nongraded primary classrooms. A feasibility study on mandated, ungraded primary programs was conducted, and ultimately the program was never implemented in Oregon (Pardini, 2005).

Despite efforts by individual states, the multiage movement has yet to take hold nationwide. Despite the fact that multiage programming exists in almost all 50 states, approximately 95% of students in the United States are educated in single-grade classrooms (Mason & Stimpson, 1996). Indeed, the trend, for many of the schools that formerly had multiage programs is to return to the traditional single-grade format, which some believe is due to the requirements imposed by NCLB and the desire for some school administrators to focus on standardized tests (Pardini, 2005). This can be attributed to the fact that NCLB requires that schools show adequate yearly progress (AYP) of its students on standardized tests or else face some form of governmental intervention or financial cuts. These standardized tests are given at each grade level and are based on specific content assigned to the various grade levels. Within the multiage
format, a second grader is taught at his own pace and progresses through content without regard to grade, such that by the end of the year, he may not have learned all of the material that will be on the standardized test. Even though the child may have learned a great deal based upon his ability, according to the test, the child did not make adequate yearly progress, for which the school and its staff would be held accountable.

Indeed, the state that was once the forerunner in multiage education has since retracted its initial program mandates. In 1998, Kentucky relaxed the mandate it established in 1990. This was largely due to the efforts of the Kentucky Education Association and local parent associations who worked against the mandate, citing membership concerns, lack of support for the programs by parent groups, and the fact that some schools simply never complied with the mandate due to lack of enforcement (Luvisi & Miller, 2001). Since the overturning of the mandate, the number of elementary schools still employing the multiage program is about half what it originally was (Dodson cited by Pardini, 2005).

That is not to say that the multiage education movement of today is without its supporters. Dr. Sandra Stone, author of *Creating the Multiage Classroom*, developed a unique institute in 1995 for teachers and it is still operating today. Held at Northern Arizona University, the National Multiage Institute offers “an in-depth study of multiage education for beginning and practicing multiage teachers with the focus on inventing a new system of education and to serve as an international/national resource for multiage educators” (Northern Arizona University, 2011). The institute, which is well attended by foreign graduate students, in addition to offering multiple graduate courses and hosting
the Southwest Multiage Conference, offers study tours to multiage schools in Australia and New Zealand.

Indeed, multiage education continues to be more prevalent in other parts of the world such as Australia and New Zealand, including parts of Asia, Canada, and Europe as well, partially due to philosophical support of such programming but mainly due to the fact that it is a means to economically educate children in geographic areas that are not heavily populated (Pardini, 2005). Much of the available international research on multiage education focuses on schools in rural areas where one room schoolhouses are quite common. In a similar manner, the United States Department of Defense has implemented the use of multiage programs for children of U.S. Armed Forces members stationed in Europe and Asia (Stone, cited by Pardini, 2005).

**Child Development and Multiage Education**

Over time, the practices and models developed by multiage classrooms have been largely influenced by constructivist learning theory as it has been presented by Piaget, Dewey, and Vygotsky (Mooney, 2000). In addition, the Montessori theory of learning has also influenced the creation of developmentally appropriate classrooms in which age and grade are not determining factors in the learning experience of children, the multiage classroom of today.

The work of Piaget is linked to the multiage classroom as he believed that learning is a process through which children develop at their own pace. From this philosophy Piaget devised four stages of development, three of which apply to school age children, from which developmentally appropriate curriculum and instruction could be
created for students. It is this emphasis on developmentally appropriate practice that is utilized in the multiage classroom.

According to Piaget, children at the preoperational stage, typically children 2 years to 6 years old, form ideas based on their perceptions. They can focus one variable at a time and overgeneralize due to limited experience. Children at this stage are egocentric and have difficulty seeing things from other people’s point of view (Mooney, 2000). Children ages 6 to 12 can be found at the concrete operational stage. Children in this stage form ideas based on reasoning that is limited to thinking about objects and familiar events and marks a period when children can begin practical and logical problem-solving (Mooney, 2000). At the formal operational stage, children 12 years and older think conceptually and hypothetically. They are able to be logical and systematically as well as to think in the abstract (Mooney, 2000).

While attending to developmentally appropriate instruction, Piagetian education, or active education, calls for teachers to provide students with educational opportunities that match students’ interests and cognitive abilities (Jacob, 1984). It also calls for active methods that utilize peer interaction (Jacob, 1984), for interaction with peers is essential in the development of thinking. Lastly, the role of the teacher should be that of mentor, one who guides and supports students through the learning process.

With much in common with Piaget, Dewey felt that education should be “child-centered; education must be both active and interactive; and education must involve the social world of the child and the community” (Mooney, 2000, p. 4). In his work *My Pedagogic Creed*, Dewey (1897) stated that “the only true education comes through the
stimulation of the child’s powers by the demands of the social situations in which he finds himself.” Thus, children learn best when they are interacting with other people in a social setting, whether it be working alone in a supportive classroom or cooperatively with peers. Ultimately, “the school runs best which operates on the principle of individual development for its pupils. It is in this sense that the school can be properly ‘child-centered’” (Archambault, 1964, p. xxvi). In the spirit of Dewey, multiage classrooms rely upon cooperative learning activities to promote learning through social interaction. Further, the “child-centered” approach is evident in multiage classrooms in the lack of grades and emphasis on individual student mastery of skills.

Vygotsky, like Piaget and Dewey, stressed the importance of “looking at each child as an individual who learns distinctively” (Dahms et al., 2008, p. 1). In order for a teacher to address those needs, a teacher needs to know each child’s zone of proximal development (ZPD). The concept of the zone of proximal development (ZPD) is “the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or the collaboration with more capable peers” (Dahms et al., 2008, p. 3). Since learning occurs just above the current level of competence, children must be provided with appropriate support or “scaffolds” to advance their learning.

Vygotsky developed a term for the person who could provide the scaffolding necessary for learning. The term “More Knowledgeable Other” (MKO) was “anyone who has a better understanding or a higher ability level than the learner” (Dahms et al., 2008, p. 4). Teachers or other students raise the student’s competence through the ZPD.
In this manner, the learner works with teachers or peers to accomplish tasks that cannot be done independently. Thus, in the classroom, the role of teacher is to work with the ZPD of each student. The teacher does not seek to control the learning environment, but rather collaborates with students to provide support and direction (Dahms et al., 2008). As other children could function as the More Knowledgeable Other, Vygotsky recommended creating learning environments where “a more competent learner would be paired with a less competent one, so that the former can elevate the latter’s competence” (p. 5). Such an arrangement promotes “sustained achievement and cognitive growth for less competent students” (p. 5).

In today’s multiage classroom, use of the zone of proximal development is referred to as Developmentally Appropriate Practice (DAP), which refers to the practice of providing curriculum and instruction “that addresses the physical, social, intellectual, emotional, and aesthetic needs” of the learners and “permits them to progress through an integrated curriculum at their own rate and pace” (Daniel & Terry, 1995). As is recommended by Vygotsky, in addition to the teacher, other children serve as the More Knowledgeable Other. Due to the age spans present in the multiage classroom, there are more opportunities for children, particularly for the oldest children in the group to take on this role. In the multiage classroom, “children can help other children without fear of being accused of cheating” (Daniel & Terry, 1995), as peer tutoring is a common practice.

The Montessori method features multiage classrooms that typically span three age levels (Seldin, 2008). Children are able to stay with the same teacher for three years and
develop a strong sense of community. There is little use of textbooks and worksheets as students are encouraged to be independent learners through hands-on experience, investigation, and research (Seldin, 2008). An important guiding principle of the Montessori method is that each child is to be respected as a person with individual needs and interests (Gutek, 2003). In this manner, children are “free to pursue their interests and activities at their own rate without facing peer group competition. They are free to observe the work of other children so that they can learn from it” (p. 181).

From the works of these theorists, modern multiage classrooms have developed into child-centered environments where children are encouraged to take different paths to learn. The teacher serves as the planner and facilitator for the students, recognizing that students need to learn how they can help themselves by becoming self-directed learners as well as learn to help others (Daniel & Terry, 1995). In order to meet the broad continuum of learning needs in the classroom, the lessons are thematic and children spend little of their day participating in whole group instruction. Students are expected to work together cooperatively and help facilitate the learning of their classmates.

Teachers’ Perceptions of Multiage Education

Teachers play an important role in the success of any multiage program. Thus, consideration for the needs of teachers with regard to training and support are factors to be considered when planning a multiage program. The type of training and support that a teacher receives can impact the teacher’s perceptions of the program as well as the overall success of the program (Miller, 1996). Specific training in teaching in a multiage classroom is a necessity (Miller, 1991, 1996); however, there are few training options
available. Indeed, many universities actually avoid placing their student teachers in multiage classrooms (Gayfer, cited by Anderson & Pavan, 1993). Moreover, there is very little in terms of course offerings or teacher training materials that address the skills necessary to be a successful teacher in a multiage setting. The exception can be found at Northern Arizona University where students can take 12 semester hours in multiage education courses. Even though the graded school system still is the predominate form of schooling in Arizona, the coursework at NAU was developed by Professor Stone, a former multiage teacher, because she believes multiage education to be “incredibly beneficial for children, parents, and teachers” (personal communication, February 8, 2008). In addition to the coursework, undergraduate students are able to work in multiage classrooms through an undergraduate professional development program (Stone, personal communication, February 8, 2008). Given the shortage of resources in higher education for teachers of multiage classrooms, one method that has developed out of necessity and proven to be effective, according to teacher surveys, is teachers learning from other teachers through observation and classroom visits (Gaustad, 1994). Given the limited training opportunities for teachers of multiage classrooms, it is not surprising that a study conducted in Canada showed that as few as 40% of teachers of multiage classrooms had received or studied research on multiage classrooms (Gomolchuk & Piland, 1995). Ultimately, the relationship between attitudes toward teaching multi-age classes and the amount or quality of training received related to multi-age classrooms has yet to be fully explored in the literature mainly due to the overall lack of training provided to teachers of multiage classrooms (Gomolchuk & Piland, 1995).
In addition to the training that is necessary, teaching in a multiage classroom is not for every teacher. When placing teachers in multiage classrooms, it should be done by choice (Craig cited in Gomolchuk & Piland, 1995; Kasten & Lolli, 1998). Teaching in a multiage classroom requires more time and effort on the part of the teacher for planning and preparation (Gaustad, 1994; Miller, 1991). Due to lack of materials and curriculum designed for multiage classrooms, teachers must be willing to create those necessary materials (Cohen, cited in Daniel & Terry, 1995). Further, teaching philosophy is important. The best teachers for a multiage classroom are “those who believe students learn by being active and engaged, thoughtful and reflective—rather than sitting passively or doing rote assignments” (Black, cited in Daniel & Terry, 1995, p. 48).

Research on teachers’ perceptions about classrooms with more than one grade in the classroom has mostly focused on combination classes or multigrade classrooms where the multiage philosophy and methodology of instruction are not used (Gomolchuk & Piland, 1995; Mason & Burns, 2001). The results of such research have evidenced largely negative teacher perceptions of such programs with teachers characterizing the combined classrooms as more difficult to teach and requiring more effort and planning (Gomolchuk & Piland, 1995; Mason & Burns, 2001). Miller (1991) reviewed the qualitative research on multigrade classrooms in rural settings, which focused largely on the needs and problems facing teachers in multigrade rural settings. Overall, teachers indicated that it was harder to motivate students in a multigrade setting and that planning and classroom management was more difficult (Miller, 1991). Teachers also reported
lack of training, professional support, and limited materials which made teaching more stressful and difficult (Miller, 1991).

In addition, Mason and Burns (2001) randomly selected 35 elementary teachers from 45 different schools in suburban southern California who were teaching in combined grade classrooms. The sample consisted of both novice and experienced teachers who were teaching in grades 1-6. The results of the study showed that teachers responded negatively, with 77% preferring not to teach in combined grade classrooms and 51% expressing strong negative feelings toward the combined classrooms (Mason & Burns, 2001). The researchers conclude that this dissatisfaction can be attributed to a lack of understanding or implementation of approaches used in multiage or nongraded classrooms. Thus, according to the researchers, to “remove grades without first understanding and accepting [a] theory of continuous pupil progress is to court local disaster and to discredit the nongraded school movement” (Goodlad & Anderson, 1987, p. 53).

The limited research on teachers’ perceptions of multiage classrooms has wide variety of teacher responses. When multiage classrooms are mandated, the overall teacher perceptions of the programs tend to be negative. This is evidenced in a 2000 study conducted by Lauer in the Monroe School District (a pseudonym), a small K-8 district in the Midwest located on a Native American reservation. The superintendent mandated the use of multiage classrooms as means to reorganize instruction and increase student achievement while at the same time providing little training and support for the new initiative. At the time of the study, though, some schools had opted to reinstate
single-grade classrooms such that not all teachers were teaching multiage classrooms. The teachers who returned to single-grade classrooms were mainly veteran teachers who openly disagreed with the mandate; it is not clear who gave the authority for the return to the single-grade classroom.

After two years of implementation, the multiage classroom teachers were surveyed and the results were compared to survey responses of teachers in a comparison district where multiage classrooms were not mandated but rather given the option of switching to multiage classrooms. The comparison district was a neighboring school district that the Monroe School District superintendent had visited and was “impressed with the multiage approach being implemented” (Lauer, 2000 p. 8). Students in the school where multiage classrooms were not mandated were 85% white, 9% Native American, and 22% of the students were eligible for free or reduced lunch, while the students in Monroe School District were largely Native American (99%) and of low socioeconomic status, with 75% eligible for free or reduced lunch (Lauer, 2000). In the school district where teachers were not mandated to teach in multiage classrooms, in 1991 and 1992 the principal invited teachers to attend voluntary study sessions about multiage education. From those sessions, several teachers decided to pilot the program in 1993. Moreover, the principal provided additional staff development time for teachers by implementing early release days on Wednesdays (Lauer, 2000).

Overall, when mandated, the teachers’ perception of their experience in multiage classrooms was negative. A group of teachers in Monroe School District reported dissatisfaction with the superintendent’s mandate, for being forced to change without
their input; as a result, teachers were divided and collaboration amongst teachers was limited (Lauer, 2000). Teachers also requested more training, reporting that they felt incompetent and unprepared to teach in multiage classrooms (Lauer, 2000). Further, the teachers reported that they did not feel that they have the adequate materials and supplies to be successful (Lauer, 2000).

In contrast to the teachers in Monroe School District, the teachers in the comparison school where a multiage program had been running successfully for several years and who had been given the choice whether or not to adopt multiage classrooms were more positive in their perceptions and more confident in their ability to instruct multiage classrooms. The comparison teachers reported their preparedness to teach in a multiage classroom as “fairly high” (Lauer, 2000, p. 23). The comparison teachers also reported higher levels of teacher collaboration and more frequent interactions with the students. Furthermore, the comparison teachers were more likely to vary grouping and instruction and were less likely to use worksheets than the teachers in Monroe School District (Lauer, 2000). In the end, the comparison district where the teachers had more positive perceptions and experiences with multiage classrooms, demonstrated higher levels of student achievement and greater parental satisfaction (Lauer, 2000), showing that not only does the approach in which multiage classrooms are implemented have an impact on teacher perception, but that the success of a program is dependent upon whether the teachers have a positive or negative perception of the program, which is often related to whether the multiage program is mandated or teachers are given a choice.
Lauer (2000) questions the generalizability of the study though due to several factors. The teachers of multiage classrooms in Monroe School District had the least amount of teaching experience. When new teachers were hired in Monroe School District they were immediately placed in multiage classrooms. In contrast, the teachers in the comparison district had many more years of teaching experience (Lauer, 2000). Further, the demographics of the two districts are quite different. Lastly, the time of implementation may have been a factor as Monroe School District had only two years of implementation whereas the comparison district had six years.

Despite the many challenges facing teachers in multiage classrooms, other studies have shown that the perceptions of teachers who teach in multiage classrooms are very positive. Marshak (1994) conducted in-depth interviews with seven teachers who shared a combined 75 years of elementary school teaching of which 39 years had occurred in multiage classrooms, eliciting responses that showed that the teachers believed that multiage classrooms had clear benefits for students, teachers, and parents. Marshak (1994) found that all teachers who were interviewed believed the following about multiage classroom experiences:

1. A multiage classroom generates more profound relationships between teacher and students, among students, and between teacher and parents. [They] used the metaphor of “family” to characterize the social qualities of their classrooms (p. 4).

2. The social climate of a multiage classroom is more positive in a variety of ways. One element of this involves the recognition of diversity by the students and their increased acceptance and even valuing of difference among their peers (p. 8).
3. Peer tutoring and interdependence leads to better learning and enhanced self-esteem (p. 9).

4. Children in a multiage classroom experience a much wider range of group roles than in a single grade experience. Each child has the opportunity to be “an elder,” a leader, and role model in the classroom (p. 11).

5. Multiage classes ease the stress of entering a new classroom for the child and allows the teacher to pay more attention to each new student (p. 12).

Gomolchuk and Piland (1995) conducted a study in northern British Columbia where multiage classrooms are quite common. Based upon the survey responses of 92 elementary classroom teachers, the researchers found that rural teachers, who often do not have a choice between single-grade classrooms or multi-age classrooms, expressed a more positive attitude toward multi-age classrooms than urban teachers. This “finding was a surprise because the majority of teachers, in both Canadian and American studies, whose opinions about multi-age classes are reported in the literature were rural teachers, the majority of whom recommended the elimination of multi-age classes” (Gomolchuk & Piland, 1995). The researchers hypothesize the reason for this difference might be the high level of community support for the multi-age classrooms in the rural settings as they have been a long-standing norm. Moreover, the research on teacher attitudes in the United States focuses on combined classrooms that are not based upon multi-age philosophies (Gomolchuk & Piland, 1995).

Further, the study found that the number of years of teaching experience in general and years of teaching in a multiage classroom did not significantly affect
teachers’ attitudes towards multiage classrooms, nor was there any difference in attitude between primary and intermediate teachers (Gomolchuk & Piland, 1995). One significant difference in teacher attitude was that teachers with positive attitudes toward multiage classes had more positive perceptions of how well students performed academically and socially in their multiage classes than those teachers with less positive attitudes toward multiage classes (Gomolchuk & Piland, 1995).

In another study conducted by Daniel and Terry (1995), who hoped to illicit a cross section of responses, the researchers interviewed a variety of multiage classroom teachers, both new and experienced, from a variety of school locations about their perceptions of their multiage programs. The researchers provided no specific information about how the survey was conducted or any specific demographic information about the teachers included in the survey, but according to the teachers who were surveyed, multiage classrooms gave students an equal chance at learning and the ability for teachers to meet the individual needs of students and promote progress. Further, the teachers believed that different age groups and abilities are an asset to the classroom environment and multiage classrooms encourage independence and cooperation (Daniel & Terry, 1995). When asked about the best aspects of multiage classrooms, teachers believed that improved self-esteem, self-motivation, and the creation of a cooperative learning environment were the best features of multiage classrooms (Daniel & Terry, 1995).

While there are many factors that contribute to positive teacher perceptions of multiage programs, it would seem that teacher perceptions are more dependent upon the factors that lead to the implementation of the multiage classroom such as choice, teacher
preparation, and administrative support. Once teachers are trained and have the necessary materials, they enjoy teaching in multiage classroom and see the benefits that such programming can have for students.

**Parents’ Perceptions of Multiage Education**

Parents have the responsibility of making the educational decisions for their children; parental needs and concerns with regard to the education of their children should be a consideration of any solid educational program (Bempechat, 1990). Parental support of school programs is a vital aspect of school success, as Bempechat’s review of the research (1990) has shown the perceptions of parents has an influence on their children’s behavior and attitude in school. With that being said, it is only natural that when traditional methods are challenged or changed by multiage education programs, that periods of uncertainty or resistance will arise, and in order to best support students, parents need to be supported as well (Walsh, 1989).

The acceptance of such programs by parents and community members is greatly impacted by the communication between the school and parents. When programs are well defined and explained, parental support has been greater. According to Goodlad and Anderson (1987) the primary consideration for administrators and school staff considering multiage programming is to take the time to get full parental understanding of multiage classrooms and the changes to be made. Moreover, school administrators of multiage programs cited parental support as the second most important factor in the success of a multiage program (Goodlad & Anderson, 1987). Whether a school decides
to continue, expand, or disband a multiage program can be significantly impacted by parents’ attitudes toward a program (Walsh, 1989).

More often than not, multiage programs are programs of choice, ones that parents actively select to enroll their students; many programs have waiting lists (Miletta, 1996; Newton, 1994). There is a great amount of research on multiage education in general, but there is little research dedicated to the subject of the parents choosing these programs and their perceptions of the programs. The majority of the data that has been collected on this topic has been part of larger studies of multiage programs in which parental perceptions were included as small components of surveys of the greater school community.

Newton (1994) conducted a research study on parents’ perceptions of multiage classes at an elementary school in southeastern Arizona. The majority of children were from low socioeconomic backgrounds (62%) and 51% of the population consisted of minority children. There was also a high mobility rate due in part to the location of an army post nearby. In this study the researcher surveyed both the parents whose children were enrolled in multiage classrooms at the primary level as well as the parents who had children enrolled in single-grade classrooms at the primary level. The results of the survey showed strong parental support of the multiage program as well as of the school in general by those parents whose children were enrolled in the multiage program compared to those parents whose children were enrolled in single-grade classrooms.

According to the survey data, parents of students in multiage classrooms believed more positively than parents of students in single-grade classrooms that their child’s teacher answered questions about their child or the school, that their child’s teacher was a
good listener, and that their child was usually happy at school (Newton, 1994). Specifically addressing the multiage program, 93% of parents agreed or strongly agreed that the multiage classes were helpful to their child’s academic skills and 91% of parents agreed or strongly agreed that the multiage classes were helpful to their child’s social skills (Newton, 1994). Of the multiage program parents surveyed, 94% agreed or strongly agreed that children are challenged in a multi-age classroom, even expressing that multiage classrooms were more innovative due to the fact that teachers did not rely upon traditional workbooks and worksheets for instruction. One parent even commented, “I am contented with the multi-age program. It is where my son has learned the most” (Newton, 1994, p. 72). Overall, 89% of parents would choose a multi-age class for their child in the following year (Newton, 1994). In the interviews that followed the surveys, parents of multiage classroom students, when asked what they liked best, mentioned social skills, academic challenge, learning from other children, and a positive attitude toward school (Newton, 1994).

Despite this high level of support, there were some misgivings about the program. Very few negative aspects of the multiage program were reported by parents of students in the multiage classroom. Some parents mentioned dissatisfaction with the lengthy, non-traditional report cards used in the multiage classrooms and the absence of traditional letter grades as well as a slight concern that older children may not be as challenged as younger children (Newton, 1994). On the other hand, parents whose children were in the single-grade classrooms, expressed largely negatively views of the multiage programs and tended to disagree or strongly disagree with statements about the benefits of the
multiage program (Newton, 1994). Given that the multiage program was a choice program, the survey results are not surprising; clearly parents made program choices for their children based upon an established set of beliefs about the programs.

Byrnes, Shuster, and Jones (1994) examined the perceptions of parents whose children were enrolled in the first year of a multiage program for students ages six through nine in a laboratory school on the Campus of Utah State University. The survey showed that most parents were satisfied with the multiage program and believed that their children were having positive experiences. When asked in the spring to compare multiage classes to single-grade classes 70% of parents said that academic progress was the same or better; only 8% said it was worse (Byrnes, Shuster, & Jones, 1994). Further, 83% of parents reported their child’s attitude toward school was the same or better; only 9% said it was worse. Parents reported similar results for their child’s behavior at school and placement in appropriate groups for instruction (Byrnes, Shuster, & Jones, 1994).

In another study conducted by Daniel and Terry (1995), who hoped to illicit a cross section of responses, the researchers interviewed a variety of parents whose students were enrolled in elementary multiage programs about their perceptions of their multiage programs. The researchers provided no specific information about how the survey was conducted or any specific demographic information about the communities or parents included in the survey; according to the parents who were surveyed, they appreciated the interaction between students and the ability for students to learn from peers. Moreover, they believed that in multiage classrooms students work well together and older children feel good about helping younger children. They also believed that
multiage programming benefits slow learners (Daniel & Terry, 1995). Parents expressed concern that gifted or high achievers needed more challenge in multiage classrooms. They also believed that there was too much work for teacher to do in a multiage classroom (Daniel & Terry, 1995).

As part of the evaluation process of multiage program called the Interage Program which grouped fourth, fifth, and sixth grade classrooms into combined multiage program which started in 1971 in a suburb of New York City and continued for over twenty years, parents were surveyed about their perceptions of the program. Interestingly, criticism of the program was largely from those parents whose children were not enrolled in the program. Students were placed in the program by parent choice. Parents whose children were enrolled in the Interage Program believed that their children were interested and committed to the program and enthusiastic about going to school (Miletta, 1996). Those parents who otherwise might not have requested the program seemed disinterested and lacked enthusiasm and others who wanted their children in the program but did not gain access felt resentment (Miletta, 1996). Parents critical of the Interage Program believed there to be problems with the admission policy, equity considerations, and the fact that there was a perceived elitist attitude of the students in the Interage Program (Miletta, 1996). With regard to the Interage Program, parents whose children were in the multiage program were highly satisfied; however, the overall level of parental satisfaction with the school was low due to the fact that there was a belief amongst parents whose children were not in the program that everyone should be treated the same, and therefore special
programs were unfair. It was that ideology that needed to be combated before the program could be fully successful.

While there have been few research studies conducted with regard to parent perceptions of multiage classrooms, there are some trends that can be determined from the existing research. Overall, parents who have children enrolled in multiage programs are satisfied with the education that their child is receiving (Byrnes, Shuster, & Jones, 1994; Elder, Clawson, & Howard, 1996; Miletta, 1996; Newton, 1994). When parents are dissatisfied, it has been with the change away from traditional report cards and grades (Newton, 1994; Pardini, 2005). Moreover, parents have the perception that multiage programs are best served for younger students as parents feel there is less challenge for gifted or high achieving students (Byrnes, Shuster, & Jones, 1994; Daniel & Terry, 1995) and that older students need more challenge (Byrnes, Shuster, & Jones, 1994; Daniel & Terry, 1995; Hunter, 1992; Newton, 1994; Walsh, 1989). The gathering of such information from parents can only serve to enhance the assessment of multiage programs and increase the effectiveness of student instruction within multiage programs.

**Multiage Classrooms at the Elementary Level**

While multiage classrooms at the elementary level share the commonality of being deliberately grouped across age levels instead of by chronological age, comprising a single learning community that meets the academic, social, emotional, physical needs of its members, there is no standard approach to the arrangement or compositions of the classes. Kasten and Lolli (1998) describe the variety that exists within multiage groupings at the elementary level as follows:
membership may take different forms and sizes, just as a family does. Sometimes a cluster (the equivalent) of two-grade levels makes a multiage class. A class of 5- to 7-year-olds (a K-1 in traditional terms) is popular, but so are classes of 6- to 8-year-olds (grades 1-2) traditionally, 8- to 10-year-olds (grades 2-4), and 9- to 12-year-olds (grades 4-6). Some teachers even think that you might as well have a complete spectrum, with 5- to 12-year-olds. (p. 3)

When creating groupings, they are called “composite” when two grade levels are grouped, “triple” when three grade levels are grouped, and “spectrum” when more than three grade levels are grouped (Kasten & Lolli, 1998).

Just as there is variety in the composition of students in the elementary multiage classroom, the arrangement of these classes varies as well. The most common arrangement is for students to be placed in self-contained classrooms where one teacher instructs a group of 18-28 students (Kasten & Lolli, 1998). In addition, two-teacher teams with approximately 45-50 students sharing one large room or a divided room or four-teacher teams with approximately 100 students arranged in a “quad” with flexible walls are other possible arrangements (Kasten & Lolli, 1998).

Regardless of the composition or arrangement of the multiage classroom at the elementary level, the research which has not differentiated between such variables, has shown that multi-age programs benefit elementary students academically, socially, and emotionally.

Studies Showing Academic Success for Elementary Students

Much research has been conducted on the effectiveness of multiage classrooms at the elementary level. Such research can be divided into two categories based upon the focus of the studies. Many studies have focused on the impact that multiage classrooms
have on student achievement. Indeed, it has been shown that children in nongraded classrooms fare as well as or better than their peers in single-grade classrooms on standard measures of achievement (Anderson & Pavan, 1993; Gutierrez & Slavin, 1992; Luvisi & Miller, 2001; Miller, 1990; Nye, 1995; Pavan, 1992). The second area that the research has focused upon is the effect that multiage classrooms have on the social-emotional development of children. Students in multiage classrooms are better behaved (Elder, Clawson, & Howard, 1996), develop lasting friendships, (McClellan & Kinsey, 1999), and demonstrate more positive prosocial behaviors than their peers in single-grade classrooms (McClellan & Kinsey, 1999).

In 1995, Tennessee State University created the School Success Study Team (SST) to conduct a longitudinal study to determine the academic and social effects of the nongraded programs in Tennessee schools (Nye, 1995). The study, designed to examine schools from 1993-1999, included students from seven schools that were implementing nongraded programs and five comparison schools. While the report only addressed the initial data, the study yielded some significant results. Using state standardized tests, the researchers concluded that students from nongraded classrooms performed significantly better than their peers in single-grade classrooms. Students in second and third grade outperformed peers in vocabulary, total reading, language, and total math. Third and fourth grade students in nongraded programs scored higher on the Holistic Writing Assessment (Nye, 1995).

Luvisi and Miller (2001) sought to determine the effects of Kentucky’s mandated nongraded primary program on academic achievement. In their study, they examined
463 of the 813 schools that had implemented a primary grades multiage program and for which standardized testing information was available between the years of 1993-1998. The study revealed that achievement improved on three separate testing measures.

Based upon the Kentucky Instructional Results Information System (KIRIS) test, students in the multiage primary programs showed marked improvement in all academic areas. The overall growth index scores improved 13.1 points. Reading scores improved 16 points, and math scores improved 22.1 points. The area of science showed a 19 point improvement, while social studies improved 10.3 points. Writing showed an improvement of 7.4 points (Luvisi & Miller, 2001). The National Assessment of Educational Progress (NAEP) was also given to the students in the areas of reading and math, and both categories showed improvement. Reading improved by 3 points, which was three points above the national mean. Math improved by 5 points (Luvisi & Miller, 2001). The final assessment used was the Comprehensive Test of Basic Skills (CTBS/5). Since the test was first given statewide in 1997, there is only one year of comparative data, but the results showed an increase of 2% on the total battery score (Luvisi & Miller, 2001).

While the authors conclude that the academic achievement of students since the implementation of nongraded classrooms has been significant, it is not clear that the improvement in academic achievement is solely linked to the use of nongraded classrooms. Given that the guidelines for implementation allowed individual schools to determine what type of program was used, some schools combined multiple grade levels in a classroom, while others only combined two. In addition, schools were left to
determine the degree of implementation as the state did not clearly articulate a vision for what the programs should look like across the state which lead to a great deal of variability in programming. Lastly, the program was one such that schools were mandated to improve or be punished. Luvisi and Miller (2001) hypothesize that is possible that the simple fear of state punishment was enough to change instructional practices that led to increased student achievement. Thus, given the design of the Kentucky Primary Program, it is unclear whether the increased student achievement on the three tests can be clearly linked to the use of multiage classrooms.

Ong, Allison, and Haladya (2000) conducted a study in which the reading, writing and mathematics achievement of students on the ASAP (Arizona Student Assessment Program) in comparable single-age and multiage classrooms were compared. This study is unique in that it included an additional variable of Title I to control for student ability. For the study, six schools, representing rural, suburban, and urban districts that had both single-age and multiage classrooms at the third grade level were selected.

The results of the study showed that, overall, students in the multiage classrooms performed better than single-age students in reading, writing, and mathematics (Ong, Allison, & Haladya, 2000). When other factors were considered, multiage, non-Title I groups scored higher than single-age, non-Title I groups. Title I students had identical reading scores, regardless of the grouping. Multiage Title I students performed better than their counterparts in mathematics (Ong, Allison, & Haladya, 2000). When ethnicity was considered, Hispanic students showed no difference in performance
whether in single-age or multiage classrooms. Overall, though, the Title I and Hispanic students performed notably lower than their non-Title I and non-Hispanic peers. The researchers concluded that based upon the research that the multiage classroom arrangement has a “sizeable advantage” (p. 212) for non-Title I students, but may not affect achievement for Title I students. If multiage classrooms are as effective as research has previously shown, then the researchers concluded that they would expect to see more success for traditionally low-performing student groups, rather than the continued low test performance of Title I and Hispanic students, which raises the question about the overall effectiveness of multiage classrooms.

Stone and Christie (1996) researched the impact that social development of multiage students could have on academic achievement. They conducted a comparative analysis between multiage (kindergarten through grade 2) and kindergarten classrooms and examined collaborate literacy during sociodramatic play. It was concluded that children in multiage classrooms demonstrated marked increases in literacy behaviors compared with their single-age peers in kindergarten (Stone & Christie, 1996). This was largely due to the fact that in multiage classrooms, children were provided more social opportunities in which they were able to expand upon basic literacy and comprehension skills while mentoring other children.

Fosco, Schleser, and Andal (2004) examined the differences in not only the reading level of students but the cognitive developmental level of elementary school children in multiage and single-age classrooms. Students in the Chicago metropolitan area in kindergarten, first, and second grade were selected for the study. Participants
were assessed using the Piagetian cognitive developmental level tests, Kaufman-Brief Intelligence Test (K-BIT), sociometric rating scales, and Wide range Achievement Test-3 (WRAT-3). The results of the study showed that children in the multiage class attained a higher cognitive developmental level at a faster pace compared to their peers in the single-age classrooms, but there were no differences in reading achievement when the two groups were compared (Fosco, Schleser, & Andal, 2004). This supports the work of Cromey (1999) who found that first graders in multiage classrooms function at a higher average cognitive level when compared to their peers in traditional first grade classrooms.

Other studies have yielded results which have not shown differences in academic achievement when children from multiage classrooms are compared to children in traditional classrooms. In 1981, Lincoln administered the reading section of the Comprehensive Test of Basic Skills to assess the reading achievement differences between first and second grade students in multiage and traditional classrooms (cited by Veenman, 1995). What Lincoln found was that there were no significant differences between the students. Upon further investigation, Lincoln (1981, as cited by Veenman, 1995) broke down the age groups and found a small, but significant difference. Older students in the multiage classroom had higher achievement levels than the older students in the traditional classroom.

Other studies have resulted in similar findings which show no difference in the reading achievement levels when students in multiage classrooms are compared to their peers in traditional classrooms. Matthews, Monasaas, and Penick (1997) tested at-risk
children in kindergarten through second grade in both nongraded and graded classrooms. After giving the Iowa test of Basic Skills and the Peabody Picture Vocabulary Test-Revised, they found no significant difference in the literacy development of the two groups. Spratt (1986, as cited in Veenman, 1995) administered the Fairfax Program of Studies Test to children in first through sixth grade in both multiage and single-age classrooms. The reading achievement levels of children in kindergarten through second grade were shown to be similar (Spratt, 1986, as cited in Veenman, 1995). Similarly, Steinhoffer (1980, as cited by Veenman, 1995) administered the Stanford Early Achievement Test to kindergartners and first graders and found no significant difference in reading ability when students from multiage classrooms were compared to students from traditional classrooms.

**Studies Showing Social-Emotional Success for Elementary Students**

The relationships formed during those years were very dynamic ones, borne of a common lust for learning and shared knowledge that we were involved in something special. They are relationships that will endure. (Drango, cited by Miletta, 1996, p. 109)

This quote is from a student reflecting on his experience in the Interage Program, a multiage program in a New York City elementary school. His words encapsulate what research has shown to be true for students participating in multiage classrooms. Multiage programs not only benefit children academically but they have been shown to have significant impact on the social and emotional well-being of children. A number of studies have focused on the affective impact that multiage classrooms can have on children. Students in multiage classrooms demonstrate increased self-esteem, better
attitudes toward school, increased prosocial behaviors, increased cooperation, better personal relationships such as friendship and have less discipline problems (Anderson & Pavan, 1993; Elder, Clawson, & Howard, 1996; French, Waas, Stright, & Baker, 1986; Grant, 1993; Gutierrez & Slavin, 1992; Katz, Evangelou, & Harmon, 1990; Lodish, 1992; Mackey, Johnson, & Wood, 1995; McClellan & Kinsey, 1999; Miller, 1993; Pratt, 1993; Stone, 1995; Uphoff & Evans, 1993; Villa & Thousand, 1993). There is research that suggests that socially “at-risk” children in multiage programs show more improvement in behavior than in traditional classrooms (Cromey, 1999).

Researchers McClellan and Kinsey (1999) sought to make a precise contribution as to what the mixing of ages does for social development in the classroom. Their study explored the potential of mixed-age versus same-age grouping for predicting children’s prosocial, aggressive, and friendship behaviors as related to their participation in a single-grade or multiage classroom using a teacher rating scale which was based on research “into the correlates of children’s social skillfulness and acceptance of other children” (p. 1). The researchers defined prosocial behaviors as helping, sharing, cooperating and caring for or taking responsibility for another as defined by Radke-Yarrow, Zahn-Waxler, and Chapman (1983). The study was divided into two parts. The first part examined the difference in social behaviors of students in first through fifth grade currently enrolled in multiage classrooms or single-grade classrooms. The second part of the study looked at the possible carryover effect for third graders previously enrolled in multiage classrooms and currently enrolled in single-grade classrooms.
The subjects of their study were children in first through fifth grade in two suburban, middle class elementary schools in the greater Chicago area and in two schools in the inner-city of Milwaukee. In the study, 29 teachers rated 566 students who were either enrolled in multiage or single-grade classrooms using a teacher rating scale in the spring of the school year. No first year teachers were included in the study, and teachers were provided anonymity in their responses.

The results of the research showed that teachers in multiage classrooms rated children’s behavior as significantly more prosocial and significantly less aggressive than the behavior of children in single-grade classrooms (McClellan & Kinsey, 1999). The children in the multiage classrooms were also rated higher in friendship behavior than their peers in single-grade classrooms (McClellan & Kinsey, 1999).

In one of the Chicago area schools, all of the classes in third grade were single-grade classes. Some of the students had previously been enrolled in first and second grade multiage classrooms for at least one year. This school was then used to follow-up on the potential effects that their multiage classroom experience might have had on their social interactions compared to their peers who had been enrolled in single-grade classrooms previously. What McClellan and Kinsey (1999) found was that social differences related to their previous schooling experience continued even after they were enrolled in a single-grade classroom. Children who had previously participated in multiage classrooms were rated as significantly more prosocial and significantly less aggressive than their peers who had only participated in single-grade classrooms.
(McClellan & Kinsey, 1999). No significant carryover differences were found in friendship behaviors.

Elder, Clawson, and Howard (1996) studied the effects of the multiage classroom on children’s attendance and social skills. Children in second through fourth grade at an urban elementary school in Elkhart, Indiana were involved in the study. One classroom from each of those grades was pulled from their single-grade classrooms for at least one afternoon each week to participate in multiage instruction. The program was thus designed as a pilot for a future full time multiage classroom.

With regard to attendance, the students in the multiage program, with the exception of one month, November, had better attendance than the general school population (Elder, Clawson, & Howard, 1996). This corroborates the research of Grant (1995) who also found that student attendance improved for children in multiage classrooms (cited by Elder, Clawson, & Howard, 1996). In order to examine social skills, the researchers selected six students, a boy and girl from each grade level to study. Each of these students had not shown appropriate behaviors in the regular classroom since the beginning of the school year, specifically looking at three desirable social skills of: not disturbing others, giving attention to the person speaking, and participating appropriately in the given activity population. The students’ behaviors were tracked and each child was awarded a point when he or she demonstrated one of the positive behaviors (Elder, Clawson, & Howard, 1996). Four of the six students demonstrated better behavior when in they were in the multiage setting. In fact, two of the students
“even became positive leaders of the group, sharing, responding, and listening with great interest” (p. 10).

French et al. (1986) found that when children were placed in multiage groups, leadership ability was affected. In this study, children were placed in groups of three and were required to reach consensus regarding the ranking of a set of pictures. Children were placed in multiage groups and single-age groups. The interactions and discussions of the groups were videotaped and then later scored to analyze the contributions of each child in the consensus creating process. Older children in the multiage groups showed increased organization of the decision-making process, solicited the opinion of group members more, and were less likely to state their opinions than peers in single-age groups (French et al., 1986). This showed that in multiage groups, older children were more likely to demonstrate prosocial behaviors and more facilitative strategies rather than attempting to dominate the group.

In a follow-up study, Stright (1988) sought to eliminate the effect that familiarity might have on the groups of children. Due to the fact that children who are the same age are more likely to have had previous social interactions with one another through recess, lunch, and school activities, and may have even previously been in the same classroom together a familiarity is created. This familiarity has the potential to interfere with the results of the study. Stright, rather than comparing the actions of children in multiage and single-age groups chose to contrast the behavior of 9-year-old children interacting with 7-year-old children and with 11-year-old children. Thus, the focus was on the behavior of 9-year-olds in groups in which they were oldest children and groups where
they were the youngest which controlled for both developmental level and familiarity. The results of the study were consistent with the findings of the previous study and suggest that multiage classrooms provide an opportunity for older children to develop and practice prosocial behaviors and leadership skills.

“The multiage classroom actually provides more realistic social interactions for its students; in real-life, adult situations, no one is grouped by age or ability” (Grant, Johnson, & Richardson, 1996). It is in these real-life situations that children flourish, allowing children to not only feel good about themselves and school, but are able to develop lasting and meaningful relationships with other children.

**Multiage Classrooms at the Middle School Level**

Multiage grouping in middle schools often takes a different format than that found in elementary schools. As noted by George and Lounsbury (2000), it:

is an organizational strategy in which students of different ages, ability levels, and interests are intentionally placed together on the same team. Typically, each team represents the school in microcosm. In a multiage-grouped middle school with grades six, seven, and eight, for example, each team may have one-third of its students from each of the three grades….Another distinguishing feature of multiage grouping is the fact that students from different grade levels remain not only in the same house or same team, but that they are frequently are grouped within classes without regard to grade level. Students remain with the team of students and teachers for three years, beginning and ending their middle school careers on the same team. (p. 21)

Other formats include multiage grouping of single subject classes, particularly elective courses, or multiage grouping of homerooms or advisory groups. As early as 1966, Eichorn called for nongraded teams at the middle school level in the book *The Middle School*, stating that the organization of team membership should center on student
developmental stages rather than chronological age. A few years later in an address to the National Middle School Association Annual Conference in 1977, Doda stated, “I would like for you to consider what I believe to be a key ingredient in promoting human involvement—multiage grouping” (p. 8, as cited by Kommer, 1999), with the belief that the benefits of multiage programming for middle school children are in the provision of “strong roots…for our kids who are struggling to be someone, somewhere” (p. 9, as cited by Kommer, 1999). Despite these early calls to action, very few middle schools have implemented multi-age programs. Thus, little research has been done or is available on this particular topic, but the research that has been done shows that multi-age programs benefit middle school students academically, socially, and emotionally.

**Studies Showing Social-Emotional Success for Middle School Students**

Lincoln Middle School in Gainesville, Florida opened in the early 1970’s and it implemented a multiage teaming strategy in which sixth, seventh, and eighth graders were equally distributed across six multiage, interdisciplinary teams. The teachers and students remained together for three years. A study of Lincoln Middle School revealed several positive aspects of the multiage program. Discipline, both inside and outside of the classroom, became less of a problem and interethnic relationships improved significantly (George, 1987). Moreover, the study revealed that beginnings and endings of the year were smoother and parent relationships were more positive and productive (George, 1987).

In 1972 Shelbourne Community School in Shelbourne, Vermont created a multiage team called Alpha Team. This team differed from the traditional multiage team
in that there was no scope or sequence of subjects to be covered in a cycle, but rather students and teachers worked together in collaboration to develop a curriculum each year (George & Lounsbury, 2000). According to interviews with the Alpha Team teachers, the multiage team format allowed for unique opportunities for students to develop positive social relationships and develop leadership skills (George & Lounsbury, 2000). Further, the multiage team concept fostered a family friendly environment and teachers commented positively about the relationships they were able to develop with students and their families (George & Lounsbury, 2000). As of 2007, the team was still operating under the same premises as its inception over 30 years ago.

George and Lounsbury (2000) surveyed 33 middle schools that used multiyear programs; 17 schools reported using multiage grouping and 11 schools reported using the student-progression or looping model. Seventy percent of the schools surveyed had programs that had been in existence only for five years or less; others had been in existence for as long as 15 years, and even 25 years. Teachers, students, and parents were involved in the survey process. George and Lounsbury (2000) determined that all three groups surveyed agreed that long-term relationships helped teachers, students, and parents experience a greater sense of community and that relationships were characterized by more care, trust, and accurate perceptions. There was some concern over the potential suffering of students who might be exposed to a poor teacher over such an extended period of time, but few reported having such an experience. Overall, the assessment of long-term relationships was rated slightly positive by parents, moderately
positive among students, and strongly positive among teachers (George & Lounsbury, 2000).

Some schools that are not able to implement a comprehensive multiage program have opted to develop multiage advisory programs like those of Wantagh Middle School in Wantagh, New York and Talent Middle School in Talent Oregon. In such an arrangement, the advisory group is composed of like numbers of students from each grade level. Students remain with the same advisor for three years; graduating eighth graders are replaced by incoming sixth graders. Wantagh Middle School reports less intergrade “mischief,” a social atmosphere where older students readily help younger students, and increased teacher awareness of the developmental needs of all the students in the building (George & Lounsbury, 2000).

**Studies Showing Both Academic Success and Social-Emotional Success for Middle School Students**

Crabapple Middle School in Roswell, Georgia implemented a Multi-Age Team (MAT) program in the fall of 1993. Under this project, students in sixth, seventh, and eighth grade, approximately 110 students, were grouped into two multiage teams (Elmore & Wisenbaker, 1996). The program evaluation began in the fall of 1993 and was completed in the fall of 1996. The evaluation process examined students’ academic as well as social-emotional development throughout the implementation of the program.

Overall, when evaluating the program there was no significant difference between the MAT students and the comparison students on Iowa Test of Basic Skills, but in the final year of the program, MAT students in seventh and eighth grade had uniformly
higher means than non-MAT students (Elmore & Wisenbaker, 1996). The program was also evaluated with regard to attendance and disciplinary referrals; while there was no significant difference between MAT students and non-MAT students with regard to attendance, discipline referrals in general were lower for MAT students, particularly in eighth grade (Elmore & Wisenbaker, 1996).

All the students were administered the Coopersmith Self-Esteem Inventory (CSEI) at the end of each year of the evaluation cycle. Overall, non-MAT students generally scored higher than MAT students; however, non-MAT students scored higher in the lower grade levels while MAT students scored higher in the higher grade levels, such that MAT students consistently scored higher than non-MAT peers by the time students reached eighth grade (Elmore & Wisenbaker, 1996). The authors’ interpretation of the data was that MAT students experienced a “greater shock” when they found themselves in a different situation than the other sixth graders and that being grouped with older more mature students could be perceived as a potentially threatening situation. The eighth graders stronger self-esteem could be explained by the traditional “top dog” position and their ability to serve as mentors to the younger students (Elmore & Wisenbaker, 1996).

When conducting interviews and surveys, the evaluators found that MAT parents were consistently more positive than non-MAT parents in their perceptions of general school effectiveness. Nearly all parents opted to continue to enroll their children in the MAT program (Elmore & Wisenbaker, 1996). Moreover, school administration was
pleased with the results of the program. Principal Linda Hopping, former principal of Crabapple Middle School, described the multiage team experiment as the:

highlight of [her] career as a middle school administrator. It embodied the very best of the middle school: a child-centered approach to educating the preadolescent; challenging curriculum with enrichment opportunities far beyond the regular classroom; hands-on integrated learning; individualized instruction at all levels; cooperative group work; natural advisory programs; a feeling of ‘family’ or community; conflict resolution and character education; opportunities for success for each child regardless of ability; and student and teacher empowerment. (Cited by George & Lounsbury, 2000, p. 32)

In 1999, Cobb County, Georgia underwent an interesting experiment in multiage design when dealing with an overcrowding situation. Ninth grade students from a high school and eighth graders from two middle schools were placed together in one building. Initially, parents and students were displeased with the arrangement. After the first year of the experiment, though, school officials were surprised by some unexpected results of the arrangement. The failure rate for ninth graders was among the lowest in the county and lower than had been previously expected (George & Lounsbury, 2000). Moreover, students expressed the opinions that student relationships were positive and that they enjoyed the bonding that occurred during the course of the year (George & Lounsbury, 2000).

While the multiage movement at the middle school level has yet to become a national movement, one state, Florida, has endorsed the benefits of multiage programs. To demonstrate its support of the multiage concept for middle grades students the Florida Schoolyear 2000 Project issued a report from its Middle School Subcommittee (1994). The report highlighted three key points. First, multiage experiences help provide a sense
of self-worth for middle school students. Second, a fluctuation of student progress often occurs in middle school and multiage or multigrade groupings diminish the negative effects on student progress. Lastly, in multiage groupings physical, emotional, and intellectual differences amongst student populations become less visible, which supports a more positive learning environment for students.

**Comparative Studies on Multiage Education**

A number of comparative studies and reviews of literature regarding multiage grouping have been conducted over the years, including Pratt (1986), Miller (1990), Miller (1991), Pavan (1992), Gutierrez and Slavin (1992) and Veenman (1995). All of the studies and reviews focus on multiage grouping at the elementary school level.

Pratt (1986) conducted a review of studies on multi-age grouping. He examined 30 empirical studies. There were 28 studies that examined the impact of multiage grouping on academic achievement; ten studies favored multiage grouping; 13 were inconclusive studies, and the remaining five studies favored conventional grouping. There were 15 studies that examined the impact of multiage grouping on social/emotional development; nine studies favored multiage grouping and six were inconclusive studies.

Pratt (1986) also examined 10 doctoral studies focused on multiage grouping. There were eight studies that examined the impact of multiage grouping on academic achievement; two studies favored multiage grouping; five were inconclusive studies, and the remaining study favored conventional grouping. There were seven studies that examined the impact of multiage grouping on social/emotional development; three studies favored multiage grouping and four were inconclusive studies.
Miller (1990), a rural education specialist, examined the quantitative research regarding the effects of multiage education on cognitive and affective outcomes, with a specific focus on rural schools. Such schools were not part of the experimental design trend in education, but rather were born of necessity based upon economics and geography. In his research, Miller found little research literature on the rural one or two-room schools, and drew upon studies that included both rural and metropolitan schools. He concluded that students in multiage classrooms were not negatively affected either academically or socially, but rather found that multiage classrooms to be a “viable and equally effective organization alternative to single-grade instruction” (p. 6). He further concluded that with regard to student affect, students in multiage programs out-performed students in single-grade programs in over 75% of the measures used (p. 7).

A year later, Miller (1911) reviewed the qualitative literature regarding multiage classrooms. The study was divided into two sections, the first was based on interviews and surveys in which he discovered the factors that contributed or did not contribute to teacher success in a multi-age classroom. The second section was concerned with studies and teacher reports describing how instruction is conducted in a multiage classroom. He concluded from his study that specialized teacher training to work in a multiage classroom was critical for success. Moreover, he noted that the demands on the teacher of a multiage classroom were far greater than that of the teacher in a single-grade classroom, noting that the multiage classroom was “not for the timid, inexperienced, or untrained teacher” (p. 11).
Anderson and Pavan (1993) conducted a study which replicated Pavan’s (1973) review of research on nongraded classrooms. It consisted of a review of 64 research studies between January 1968 and December 1990 on nongraded programs. The study concluded the following:

1. Research studies comparing nongraded and graded schools provide a consistent pattern favoring nongradeness.

2. The nongraded groups performed better (58%) or as well as (33%) the graded groups on measures of academic achievement.

3. On mental health and school attitudes, students scored higher on the Coopersmith Self-Esteem Inventory, except in one study with no significant differences. The same pattern was seen when the Piers Harris Children’s Self-Concept Scale was used. Overall, 52% of the studies indicated nongraded schools are better for students, and 43% showed the two different groupings to have similar results. Only 5% showed nongraded as worse than graded schools.

4. The benefits to students of nongradeness increase as students have longer nongraded experiences. Students who had spent their entire elementary years in the same nongraded school reported academic achievement higher than that of students who had spent the same years in a traditional school.

5. Blacks, boys, low socioeconomic level students, and underachievers benefit from a nongraded program.
Thus, the authors concluded that non-graded programs benefit students both academically and socially. Anderson and Pavan (1993) argue that the last finding regarding African-American students, boys, and students from low-socioeconomic backgrounds is particularly important given that these groups typically do poorly on standard measures of academic achievement.

Gutierrez and Slavin (1992) created a synthesis of the best evidence concerning the achievement effects of nongraded schools, using 57 research studies dating from 1958 to 1985 for their findings. The study was divided into categories which included: nongraded programs involving only one subject (Joplin-like programs), nongraded programs involving multiple subjects (comprehensive programs), nongraded programs incorporating individualized instruction, Individually Guided Education (IGE), and studies lacking an explicit description of the nongraded program. From the study, Gutierrez and Slavin (1992) concluded that positive effects on achievement were made in both the Joplin-like programs and the comprehensive programs. Nongraded programs that incorporated a great deal of individualized instruction were less consistently associated with student achievement, generally not hurting nor helping student achievement.

Thus, the authors concluded that the effects on achievement are largely dependent upon the program that is being implemented. Multiage grouping is not solely the answer in itself. Multiage grouping can provide teachers with opportunities to provide direct instruction in a meaningful manner which can lead to improved achievement.
Veenman (1995) created a synthesis of the best evidence concerning the cognitive and noncognitive effects of multigrade and multiage classrooms. Veenman examined 56 studies conducted between 1938 and 1993; 33 were conducted in the United States and the remaining studies from were foreign studies ranging from Australia, Canada, and countries in Europe, Africa, and Asia. While the research is dated, it does provide a solid foundation of the previous trends in the research on multiage education. To date, there has yet to be another meta-analysis like that conducted by Veenman that contains the more current research. Based upon the research, Veenman concluded that students in multigrade classrooms do not appear to learn more or less than their peers in single-grade classrooms as no consistent differences were found in reading, mathematics, or language. Moreover, in the affective domains such as self-concept, attitude toward school and social adjustment, students were sometimes better off in multigrade classrooms than in single-grade classrooms. The results for multiage classrooms were determined to be much the same as those of the multigrade classroom. Students were no better or no worse academically having participated in a multiage classroom. With regard to the affective domain, the number of significant positive outcome studies was greater than the studies which yielded no significant difference, with students scoring higher on attitudes toward school, personal adjustment, and self-concept.

Veenman (1995) concludes, therefore, that there are no significant differences in achievement. Moreover, there were no consistent differences on noncognitive effects. Thus, there is no empirical evidence that multiage groupings enhances or detract from
academic achievement and student affective domains as measured by standardized tests and measures of noncognitive factors.

In 1996, Mason and Burns reanalyzed the data from Veenman’s (1995) study, believing that Veenman’s “advocacy of multi-age classes and cross-grade grouping colors his interpretation of the findings and steers him to a conclusion that favors multigrade classes” (p. 308). Using 38 of the studies from Veenman’s study and an additional 21 studies of their choosing, Mason and Burns reached a number of conclusions. First, they determined that Veenman’s review of the research was more objective and bears more credence than previous reviews such as those conducted by Pratt (1986), Miller (1990), and Anderson and Pavan (1993). The subject of greatest criticism with regard to Veenman’s research was that the selection process of students for multiage classrooms was not addressed. The authors argue that most often multiage programs are ones based on parent choice, such that the students involved with multiage classrooms are typically more able, cooperative and well-behaved than their peers. Moreover, Mason and Burns (1996) cite evidence to show that better teachers are assigned to these classes, which would skew the results of a comparative study.

Mason and Burns (1996) concluded that multiage classrooms in fact have a small negative effect on student achievement as well as potentially negative effects on teachers due to the stress of such a position and the classroom management skills required. They further concluded that field experiments where true heterogeneous groupings are created and studied along with observational research is needed to solidify the potential effects of multiage grouping on achievement.
It would seem the results of the comparable studies are inconsistent. While Anderson and Pavan’s (1993) findings are 97% in agreement with Gutierrez and Slavin (1992) (Guskey & Lindle, 1997), there is only 56% agreement between the findings of Anderson and Pavan (1993) and Veenman (1995) (Guskey & Lindle, 1997). It has been suggested that such inconsistencies in the research results are due to the inconsistent definition of multiage education (Veenman, 1995). Pavan (1992) and Pratt (1986) attribute the difference to the weak controls for differences between experimental and control conditions as well as the lack of data analysis. Moreover, some of the differences can be accounted for in differences of the individual researchers with regard to personal bias in weighing positive and insignificant results versus significantly negative results (Mason & Burns, 1996).

**Transition from Elementary School to Middle School**

The transition from elementary school to middle school marks not only a turning point in a child’s educational career, but it also is a point where physical, social, and emotional changes occur. The transition into middle school often signals the end of childhood and the beginning of adolescence (Hirsch & Rapkin, 1987). Self-esteem and how a student defines himself can be dramatically impacted by this shift. This transition involves “adaptation to a set of psychological tasks which include a variety of factors…. [such as] an unfamiliar environment, shifts in role definition, new sets of peers and adults, uncertainty about the rules and procedures and lack of knowledge of how to access support resources” (Diemert, 1992, p. 10). These changes in the educational setting coincide with the physical changes of puberty; the physical, emotional, and social
changes that occur in puberty have been associated with heightened emotionality, conflict, and defiance of adults (Akos, 2002).

Research has shown that adolescents are affected in a number of ways during the transition from elementary school to middle school. Notable shifts occur in both how students feel and perform in school. “Students’ perceptions of the quality of school life decline as they progress from elementary to secondary school with the largest decline occurring during the transition to a middle level school” (Schumacher, 1998, p. 2). Motivation and attitudes towards school tends to decline during the transition (Anderman & Midgley, 1996; Harter, 1981) and this decline occurs regardless of academic ability (Elias et al., 1992; Hirsch & Rapkin, 1987). Poorer academic performance also occurs during this transitional period (Anderman & Midgley, 1996; Felner, Ginter, & Primavera, 1982, cited by Diemert, 1992).

This decline can be attributed to a number of factors. The method of instruction at the middle school and teacher expectations for learning is different than that the elementary level. Middle level schools stress relative ability and competition among students more and effort and improvement less, leading to a decline in task goals, ability goals, and academic efficacy (Anderman & Midgley, 1996; Schumacher, 1998). Teacher distance and student alienation is another factor that must be considered during the transition as students see a variety of teachers in the departmentalized middle school, many more teachers than they would have had during their elementary school years. At the middle level the increased distance between teachers can result in disengagement from school, misbehavior, and poor grades (Schlosser, 1992).
To further understand the transition to middle school, a needs assessment study conducted by Diemert in 1992 of 23 fifth graders in a middle level school revealed from the adolescents’ perspective what areas that they felt the school needed to address for them in order to ease the transition. Of the top 11 (out of 23 possible) needs identified by boys, six were social, two were academic, two were procedural, and one was academic and procedural. Boys indicated the greatest needs as follows: to know how to get my books and supplies ready for different classes (90%), to know a teacher I could talk to if I was confused about something (90%) and to know how to make new friends (Diemert, 1992). Of the top ten needs identified by girls, five were social, two were academic, and three were procedural. Girls indicated the greatest needs as follows: to know how to find my classes and my way around the school (100%), to know the school rules and consequences for breaking those rules (100%) and to know a teacher I could talk to if I was confused about something (100%) (Diemert, 1992). It is important to note that both boys and girls expressed a need to know a teacher to whom they could talk about problems. Meeting the social needs of students during this transition period is a key consideration for middle level educators as most programs that aid with the transition focus on academics and rules and regulations (Schumacher, 1998); the research of Diemert (1992) shows that students have greater social concerns and needs than academic and procedural needs.

In 2004, Akos and Galassi conducted a study that compared the perceptions of middle school transitions as viewed by students, parents, and teachers. One hundred seventy-three sixth grade students, 83 parents, and 12 teachers were surveyed. According
to the study, parents and students were in close agreement about the top student transition concerns, focusing on academic and procedural concerns. The amount of homework and getting lost were the biggest concerns (Akos & Galassi, 2004). Students additionally were concerned with getting to class on time, while parents reported concerns with students fitting in and making friends and dealing with pressures. Teachers, however, focused more on the students’ ability to navigate the school building and on the students’ social interactions (Akos & Galassi, 2004).

Further, the study, unlike much of the body of research, asked all participants about the positive aspects of the transition with regard to the aspects of middle school to which students look forward. In this regard, students, teachers, and parents were all in agreement about the top choices which were choosing classes and making new friends (Akos & Galassi, 2004). This study was conducted in a high-performing school district which could explain the student and parent emphasis on academics as opposed to social concerns as seen in other research. With this being said, it provides an interesting look at the transition process from the perspective of all the stakeholders, and suggests that what school leaders and educators deem to be the biggest concerns for students during the transition may not be what the students would like to see addressed.

Indeed, much of the research on the transition from elementary school to middle school focuses on the activities and programs used to aid in the transition. School environment, teacher accessibility, and social support systems have been identified as some factors that may ease the transition from elementary school to middle schools (Elias et al., 1992; Schlosser, 1992). Some specific programs that are used to aid with transition
are fifth grade visits and orientations, summer academies for students needing additional support, and team building and character building education programs used to welcome students during their first few days of school (George, Breslin, & Evans, 2007). It is also recommended that transition programs address peers, family, and teachers as means of fully supporting students through the process (Akos, 2002).

While most children experience a number of small transitions throughout their educational career, the transition from elementary school to middle school marks a time of dramatic changes in the educational, physical, and emotional life of students. Because research has shown that this change generally has a negative impact on student achievement and attitude toward school, schools have attempted to create programs to aid with the transition process.

**Transition from a Multiage Classroom to a Traditional Classroom**

While there is considerable research on the impact of multiage programming on the academic achievement and social development of elementary students, there is limited research on what happens to these children after they leave their multiage elementary programs and begin schooling in traditional middle school settings. To date, four research studies have addressed this particular issue.

The first work was conducted nearly 30 years ago when Stevenson (1979) examined the transitional experiences of 13 students who were educated at an open education school. Students ranged in age from 14 to 19; some of the students had already graduated from high school. Overall, the students in the study remarked that they were able to adapt quickly to the new school setting. Adjusting to the testing and grading
systems did not cause significant problems for students. The students noted that the
differences in the teacher roles and their relationships with the new teachers required
adjustment (Stevenson, 1979). Further, the students in the study “stressed the importance
of the quality of interpersonal transactions as the overriding factor in adjusting to
secondary school” (Stevenson, 1979, abstract), denoting perceived differences between
themselves and their peers from traditional schooling backgrounds.

Similarly, in 1982, Heckler examined the transition of open education elementary
students to a junior high school. Eight students who had spent at least five years in an
open education program were selected for in-depth interviews. While students remarked
that they noticed the differences between the grading and curriculum presented at the
junior high, they were able to adapt readily to the differences (Heckler, 1982). Students
in the study expressed no difficulty in developing peer relationships or relationships with
teachers. The researcher explains that a likely cause of this phenomena was the fact that
that the junior high and its teachers were supportive of the open education program.
Teachers at the junior high offered many opportunities for collaboration and group work
(Heckler, 1982).

In 1998 Wick conducted a qualitative study, utilizing interviews and observations,
in which she examined the transitional experiences of nine students during their sixth
grade year in a traditional graded program after having spent the previous four years in a
multiage elementary program. The purpose of the study was to assess the multiage
program called the Multiage PALs Program and to determine how the programming
might have impacted students during their transitional year as well as to examine
practitioner research as a form of assessment, given the researcher’s identification with the program as one of the original founders.

When students were asked to compare/contrast their experiences with multiage and middle school, students identified several key points:

1. Differentiation among learners was more evident in the middle school. In the multiage program, students did not notice that other students had special needs or were receiving extra help.

2. Students felt that they had more opportunities to be involved in decision-making in elementary school, whereas at the middle school they were expected to simply comply with teacher expectations.

3. Work time at the middle school was often quiet and students were discouraged from working together, whereas students felt that they were able to collaborate more and receive help from classmates at the elementary level.

4. Students adjusted to the grading system with little difficulty (Wick, 1989).

While Wick (1989) did not design the study to measure self-esteem, some of the initial data suggests that self-esteem was affected at the beginning of the year. Girls experienced frustration in math, and students struggled with understanding how to get help, often asking questions of parents when they got home. Teachers complained of student “complacency and the willingness to stop upon the completion of minimum expectations” (p. 491). Students had “resigned themselves to believe that they would have little impact on changing the conditions in which they learned...[and] projected a sense of complacency and perhaps a degree of smugness toward the end of the sixth
grade school year” (p. 530). Moreover, students found themselves longing for aspects of the community and relationships that they had experienced in the multiage classroom (Wick, 1989).

Wick (1989) also conducted interviews with parents and teachers to gather data about the effectiveness of the multiage program. Parents supported the multiage program and expressed an interest in comparing students from multiage and regular graded classrooms to see what impact multiage programming might have had on student achievement, a factor not studied in the research. The sixth grade teachers did not indicate any concerns about preparation of the students who had been previously enrolled in multiage classrooms. To them students were identified as high achievers based upon grades, but there were no additional patterns made them different from other sixth graders (Wick, 1989).

The most recent work to be conducted on the transition experience of multiage students was nearly 10 years ago. Camilli (1999) wrote a dissertation that focused on interviews with students who had previously been educated in multiage classrooms and had transitioned to a single-grade classroom. Twenty-two of the students were in fourth through sixth grade. The majority of these students were sixth grade students who were placed in traditional sixth grade classrooms after the administration made the decision to disband the fifth/sixth multiage classroom. Parental requests were the reason that the remaining students in the study were no longer in multiage classrooms (Camilli, 1999). Most of the students who were interviewed only had one or two years of experience in
the multiage setting. Five other students were eighth grade students who had been involved in a multiage fifth/sixth grade class.

Several points arose during the course of the interviews. Students felt that they received more help in the multiage classroom and that the work was more textbook driven and less creative in single-grade classrooms (Camilli, 1999). Students also felt more accepted in the multiage classroom and comfortable and that they had learned more in those classrooms than in the single-grade classrooms (Camilli, 1999). The researcher further identified three themes of the transition experience: a shift from integrated curriculum to compartmentalized curriculum, from a feeling of community to a sense of isolation, and from a more democratic classroom environment to a more autocratic environment (Camilli, 1999).

Teachers and other paraprofessionals were surveyed and interviewed to gather their perspective on the transition experiences of students who had once been placed in multiage classrooms but were now enrolled in their single-grade classrooms. Teachers noted that some students had more difficulty transitioning to the single-grade classroom, but they attributed it to student personality rather than a result of their experiences in the multiage classroom. While in general teachers did not express any perceived differences in students who came from multiage classrooms, some teachers did note that “multiage students seem to feel more responsible in helping others—almost to the extent of interfering with completing own work” (Camilli, 1999, p. 133) and were more likely to be off-task.
Overall, most of students who were interviewed did not appear to notice or experience any effects of the transition, but a few did encounter difficulty. The researcher attributes the ease of the transition to the personality of the teacher, rather than having anything to do with programmatic effects. Students appeared to transition easily into classrooms when the teacher was warm and caring. Conversely, students experienced difficult transitions when the teacher was less personable and more focused on teaching the content (Camilli, 1999). Another factor to be considered in this case is the multiage program in the study had been in place for three years and that many of the students selected for the study in addition to having very little experience with multiage classrooms left the program by choice or had been out of the multiage setting for over two years at the time of the interviews.

The limitations of these studies must be noted, such that gaps in the research cause the reliability and validity of the studies to be questioned. In the case of the studies by Stevenson (1979) and Camilli (1999) the research was not conducted during the year of transition. In some instances, the students were interviewed up to five years after their transition year. Further, in the case of the research conducted by Camilli, the transition experience of the students may even been effected by the parents perceptions of the multiage program given the fact that many of the students had exited the program due to parental choice and not due to a natural transition to a traditional school. Lastly, all of the studies were qualitative in design, providing no control group for comparison. These considerations attribute to the fact that further research in the area of the transitional experiences of multiage students is necessary.
Summary

This review of the literature suggests that while multiage programming has been used as modern reform strategy to improve instruction for students, it is not a new phenomenon. Indeed, multiage programming has had a long history and clear connections to child development and constructivist theory. There is a strong research base for the use of multiage programming as it provides academic and affective benefits to students, both at the elementary and middle level. The research has shown that students who participate in multiage programming have the same if not higher levels of academic achievement as their peers in single grade classrooms. Moreover, students in multiage classrooms report better attitudes toward school and demonstrate more prosocial behaviors than their peers in single grade classrooms.

While much is known about the success of students who participate in multiage programming, little is known about what happens to these children after they leave the multiage classroom. As children must inevitably enroll in a single-grade classroom upon entering middle school, there is a need for further research that explores the transition process and its effects for students who have been enrolled in elementary multiage classrooms as they continue their academic career in traditional single-grade classrooms at the middle level. The research that addresses the transition experiences of elementary students to middle school fails to consider the differences such programming can have on students’ transitional experiences. The most recent research on this subject was conducted 10 years ago. Consequently, more research of both a qualitative and
quantitative nature is required to fully examine the transition experience of students who have previously been enrolled in multiage classrooms.
CHAPTER III
METHODOLOGY

Definition of Mixed Methods Research

This study utilized a mixed method approach, using a combination of quantitative and qualitative methodologies. A mixed method approach is more than “simply collecting and analyzing both kinds of data; it also involves the use of both approaches in tandem so that the overall strength of a study is greater than either qualitative or quantitative research” (Creswell, 2009). According to Creswell, researchers typically use mixed methods research designs for the following reasons:

- To better understand a research problem by converging broad numeric trends from quantitative research and the detail of qualitative research.
- To obtain, statistical, quantitative results from a sample and then follow up with a few individuals to help explain those results in more depth.

It was the intent of the researcher to use the most common application of the mixed method approach, in which the researcher begins by assessing a large number of participants using standardized instruments and questionnaires and then conducts interviews with a subset of the original population in order to derive a deeper understanding of the transition to middle school as experienced by students previously enrolled in multiage classrooms (Rudestam & Newton, 2001). Given that only a small number of students who were eligible for the study agreed to participate, eight students
out of approximately 60, the researcher was unable to utilize this application of the mixed method research design. Thus, in order to better understand the research problem, numeric trends were collected from the questionnaires and standardized instruments given to all the students, and all students were interviewed to provide the detail of the qualitative research. By comparing both qualitative and quantitative data, a more balanced and accurate description of the transition experience of multiage elementary students could be drawn (Chatterji, 2005). This chapter includes descriptions of the research setting, the selection process for students, the instruments, and the data collection process that was used.

Setting

The elementary school district featured in this study is located in northern Illinois in a suburb of Chicago. It is a large sized district that services approximately 14,000 students in grades K-8. There are 27 schools in the district, consisting of 21 elementary buildings, five middle schools for grades 7-8, and one PreK-8 multiage school. The district offers an open enrollment program where instead of sending their child to the neighborhood school, parents may apply to send their child to one of nine schools that offer special programs such as dual language or multiage classrooms. In the district, the ethnicity of the students is as follows: 51.6% White, 17.9% Hispanic, 6.7% Black, 19.3% Asian, and 4.4% Multiracial. Twelve percent of the students in the district are classified as low-income. This district was selected for the study due to the fact that the multiage program is well established in several of the district’s schools and is supported by the community, having existed for several years.
Elementary School A, which services between 430-460 students, is a K-6 school in which students in grades 1-6 are assigned multi-age groupings of children of a two year age span. These models were adopted by Elementary School A to provide a “child-centered” learning environment based upon continuous progress as well as to provide opportunities for social interactions and to promote student leadership. The school offers an integrated, theme-based curriculum in which students work in a collaborative environment which “parallels the workplace.” Teachers use “flexible, temporary groups to give instruction to students, regardless of age, who need the same kind of instruction for specific skills” (Parent and Student Handbook, 2009).

The student population of Elementary School A has 5.3% of students classified as low income. The ethnicity of the students is as follows: 63.1%, White, 15% Hispanic, 4.9% Black, 16.8% Asian, and .2% Native American. Approximately 8% of the students are classified as Limited English Proficient. There are six fifth/sixth grade multiage classrooms, six third/fourth grade multiage classrooms, six first/second grade multiage classrooms, and one single grade Kindergarten classroom. Elementary School A has a strong history of academic achievement. The school has made AYP every year from 2003-2008. In 2008, 91.6% of the students met or exceeded standards on the state tests. The state awarded the school the Academic Excellence Award which is given to schools where 90% of the students pass the state tests for three consecutive years.

The junior high school services 705 students in grades 7 and 8. The student population of the middle school mirrors that of the district with 11% of students classified as low income. The ethnicity of the students is as follows: 64.4%, White, 14.4%
Hispanic, 5.7% Black, 13% Asian, and 2.3% Multiracial. In terms of academic achievement, the middle school has made AYP every year from 2005-2008. Prior to 2005, the school failed to make AYP in mathematics for the students with disabilities subgroup. The school has a history of overall strong academic achievement with 90.3% of students meeting or exceeding standards in all subject areas in 2008.

**Participants**

The researcher created a purposive sample which included students from the population of students at Elementary School A who were transitioning to the middle school after spending the previous three years in a multiage classroom. The researcher first contacted the assistant superintendent of curriculum and instruction who gained permission from the superintendent of schools to conduct the study. Next, the principals of the targeted schools were notified of the study. The researcher supplied the junior high principal with the invitations to participate in the study which included parent consent and student assent forms to be distributed in September, several weeks after school had started. The parent consent form explained the details of the study. Student assent forms presented a child-friendly discussion of the study. The principal gave each seventh grade homeroom teacher the research invitations to distribute to students. Prior to dismissal to first period, homeroom teachers made a general announcement to their classes. Individual student names were not called. Students were instructed that if they attended Elementary School A prior to attending the Jr. High to take an envelope addressed to their parents, which included the consent and assent forms, on their way to their first class. Students were responsible for taking the forms home, and parents were expected to return the
consent and student assent forms within seven days to their child's homeroom teacher. Homeroom teachers submitted the forms to the main office to be collected by the researcher. By giving consent, parents acknowledged that their child had participated in the multiage program for at least three years prior to transitioning to the junior high. Eight students (five girls and three boys) consented to participate in the research study. Of the eight students, one student only agreed to complete the questionnaires, for that reason, the researcher was only able to interview seven of the students during the course of the study.

Quantitative Instruments

Several instruments were used to collect quantitative data. The Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) was used to assess the students’ social and emotional well-being during the transition. The Piers Harris Self-Concept Scale has been used in studies of self-concept for children participating in open education classrooms (Owen, 1974; Reynolds, 1974). This research tool is a 60-item self-report questionnaire that is designed to assess self-concept in children between the ages of 7 and 18. The respondents were required to answer by circling “Yes” or “No” to each question. The six subscales of the test cover:

1. Behavioral adjustment (BEH): a 14 item scale that measures admission or denial of problematic behaviors in home and school.
2. Intellectual and school status (INT): a 16 item scale that measures the child’s evaluation of his or her own abilities in terms of intellectual abilities and academic performance.
3. Physical appearance and attributes (PHY): an 11 item scale that measures a child’s assessment of his or her physical appearance as well as their appraisals of certain personality attributes such as the ability to express one’s ideas and leadership abilities.

4. Freedom from anxiety (FRE): a 14 item scale that measures anxiety and dysphoric mood. Individual items tap a variety of specific emotions, including worry, nervousness, shyness, sadness, and fear.

5. Popularity (POP): a 12 item scale that represents the child’s evaluation of his or her own social functioning. The items tap perceived popularity, ability to make friends, and inclusion in such activities such as games and sports.


Raw scores are converted to standardized t-scores (mean = 50, Standard deviation = 10) and percentile ranks. T-Score ranges for the TOT scale are: <29T is very low, 30-39Tis low, 40T-44T is low average, 45T-55T average, 56T-59T- is high average, 60T-69T is high and > 70 is very high. For the six subscales T-Score ranges < 29T is very low, 30T-39T is low, 40T-44T is low average, 45T-55T is average and > 56T is above average (Early Childhood Measurement and Evaluation Resource Centre, 2008).

The Piers-Harris 2 was standardized using a sample of 1,387 children ranging in age from 7 to 18. The sample was stratified according to the 2001 U.S. Census and included demographic variables such as age, sex, race/ethnicity, geographic region, and
head of household’s education level (Early Childhood Measurement and Evaluation Resource Centre, 2008). The test includes two scales that assess the validity of student responses: Inconsistent Responding (INC) and Report Bias (RES). Construct validity was determined by interscale correlation analysis and factor analysis. The standardization study for the Piers-Harris 2 demonstrated that the instrument has “excellent internal stability, and the measure’s test-retest reliability is upheld by numerous studies of the original Piers-Harris” (Piers & Herzberg, 2002 p. 70). Construct validity of the instrument is supported by studies “indicating that the original and revised instruments show expected relationships with self-concept questionnaires, as well as with measures of other personality and behavioral characteristics” (Piers & Herzberg, 2002 p. 71). This measure was given to students at three points during the transition year: fall, winter, and spring.

In order to determine the specific concerns of the students during the transition, a questionnaire was given to students. As no standardized middle school transition questionnaire exists, the researcher developed a questionnaire. Following the work of Diemert (1992), questions were developed in three survey categories: 1) academic, 2) procedures/rules, and 3) social life. The questionnaire was reviewed by a district level reading committee in a district other than the district where the research was conducted to determine the content and face validity of the instrument. The committee consisted of nine teachers in grade levels K-8, all with expertise or interest in the improvement of reading instruction for students. Five of the committee members have served or currently serve as literacy coaches in the district. With the exception of three teachers, the teachers
currently teach or had previously taught in a middle school setting. The combined total
teaching experience of the group was 110 years. Teachers ranged in the number of years
of teaching experience from 5 to 35 years, with an average of a little over 12 years of
experience per teacher.

The reading committee members were first asked to assess the readability of the
questionnaire. Overall, the committee members felt that the average seventh grader could
read and respond to the questionnaire. A few concerns were raised in the wording of the
academics items. One teacher was concerned with wording of “having a new grading
system” on the final questionnaire as at the beginning of the year it is appropriate, but at
the end of the year it may confuse students as the grading system would no longer be
new. For the sake of continuity, the researcher felt that the wording needed to appear the
same on all questionnaires and that researcher cannot assume that it would not feel “new”
to some of the students even if they have had experience with it for some months. Two
of the teachers mentioned that “knowing the amount of homework” could be confusing to
some students and suggested “knowing what homework I have for the day” or “amount
of homework” as possible replacement items. Making such changes would alter the
context of the item as well as differentiate it from what was asked on the survey utilized
in the Diemart (1992) study, the model used in the development of the instrument. Since
the majority of teachers had no issue with the question and the researcher planned to ask
interview questions that would address the student concern with the amount of
homework, the researcher decided to keep the item as it was on the questionnaire.
Teachers on the committee were then asked to evaluate the content appropriateness of the questionnaire. Teachers commented that the items on the survey were “legitimate,” “appropriate,” and that the survey “hit some good points most kids would not feel verbally comfortable talking about out loud.” In addition, some teachers commented that the social life items were “very applicable” and that the academics items would be the “least concern” students. This feedback indicated to the researcher that the questionnaire had appropriate face validity and would address the transition concerns of students. During the research study, the questionnaire was given to students during the same session as the Piers-Harris 2 at three points during the transition year: fall, winter, and spring.

**Qualitative Instruments**

During the interview process, students were asked open-ended questions. Restatement of questions or more probing questions based on student responses were used to further develop responses. Student interviews were focused on three themes.

In the fall students were asked about the immediate issues that that they were facing during the initial phases of the transition.

1. How is middle school different than elementary school?
2. What is the biggest difference that you have noticed?
3. How are your teachers different?
4. Is the classwork or homework different? How?
5. Are your relationships with classmates different? How?
6. How do you feel about being a middle school student?
7. How well do you think that you are managing all the changes?

8. If you could change one thing right now about being a seventh grader, what would it be?

9. Is there anything that you still miss about being in elementary school or being in a multiage classroom?

In the winter, students were asked questions about what was still an issue for them and what had changed since the first round of interviews.

   1. Previously you mentioned that you were concerned with _______. Are these things still concerns? Why or why not?
   2. What is your relationship with your teachers like now?
   3. How do you feel about what you are learning in class?
   4. How do you feel about the amount of work expected?
   5. What is your relationship with other students like now?
   6. How do you feel about being a 7th grader now?
   7. Do you think that you have changed since the beginning of the year? How?
   8. How well do you think that you are managing the changes?
   9. What have you learned about middle school that you wish you would have known at the beginning of the year?
   10. Is there anything that you still miss about being in elementary school or being in a multiage classroom?

In the spring, students were asked questions to help them reflect about their transition experience.
1. What is your relationship with your teachers like now?
2. What is your relationship with other students like now?
3. Do you think that you have changed since the beginning of the year? How?
4. What advice would you give to other students from multiage classrooms about middle school?
5. What is the most important thing that you think that they should know?
6. What advice would you give to multiage teachers to help them prepare their students for middle school?
7. What advice would you give to middle school teachers to help make the transition to middle school easier for multiage students?
8. Is there anything that you still miss about being in elementary school or being in a multiage classroom?
9. Overall, how would you describe your first year in middle school?

Interview responses were examined. The commonalities in student responses were identified and coded into general themes. The identification of these themes was used to further describe the quantitative findings.

**Data Collection and Analysis**

In order to facilitate triangulation, data was solicited from “multiple and different sources as a means of corroborating evidence and illuminating a theme” (Rudestam & Newton, 2001). Data collection included student questionnaires. Affective data on the students was collected using the Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2). Descriptive statistics for the quantitative data were computed.
In addition to the descriptive statistics, a repeated measures design analysis of variance were used to determine if the students’ scores had changed significantly during their 7th grade year of transition. This provided a quantitative data source. Interviews with students provided a qualitative data source. The data gathered during the interviews were used to explore the opinions and experiences of the students that would not necessarily be elicited from the questionnaires.

During the fall of the seventh grade year, the beginning of the transition, October and November 2009, students took the Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2). At this same time, the students also took the middle school transition questionnaire. The questionnaires were given during lunch time. The researcher called all of the students to a private meeting room for group administration. Students were identified by a number that only the researcher was able to link to the student. Within several days of completing the questionnaire, in order to conduct the interviews and to minimize disruption of the school day, the researcher pulled students during a working lunch to meet with them one-on-one in a private meeting room. Interviews lasted five to ten minutes and were audio tape recorded and then transcribed for analysis.

In February, the researcher met with the participants who completed the mid-year middle school transition questionnaire and the Piers Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) for a second time. Student interviews were conducted.

During the spring of the seventh grade, the end of the transition, May 2010, students completed the final transition questionnaire. The final of administration of the
Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) was given as well. Final interviews were conducted.

**Timeline for Data Collection**

<table>
<thead>
<tr>
<th>Date</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>October/November 2009</td>
<td>Seventh grade students completed the first middle school transition questionnaire and the Piers Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) Student interviews were conducted</td>
</tr>
<tr>
<td>February 2010</td>
<td>Seventh grade students completed the mid-year middle school transition questionnaire and the Piers Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) Student interviews were conducted</td>
</tr>
<tr>
<td>May 2010</td>
<td>Seventh grade students completed the end of the year middle school transition questionnaire and the Piers Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) Final student interviews were conducted</td>
</tr>
</tbody>
</table>
**Ethical Issues**

This study was conducted within the guidelines of the Institutional Review Board (IRB) of Loyola University Chicago. To ensure that the study was ethical, several precautions were followed. First, a letter of cooperating agreement from the principal was written, which granted the researcher formal permission to conduct research in the school. Further, the parents or guardians of the participants were informed of the purpose of the study and how data will be collected. Participants will also be informed of the purpose of the study and how data was to be collected. Both parents and students were informed that participation in the study was completely voluntary. When parents agreed to allow their children to participate, signed consent forms were collected. In addition, students signed assent forms to document their willingness to participate in the study. Participants were informed that they could choose to withdraw from the study or if after the completion of surveys did not wish to participate in the interviews; they were allowed to do so at any time. To protect the identity of students and schools, pseudonyms and number codes were used to insure anonymity. Research materials such as questionnaires, audiotapes, and transcripts were kept in a locked drawer in the researcher’s office.
CHAPTER IV

DATA ANALYSIS

The purpose of this study was to examine the transitional experience of students who move from multiage elementary programs to traditional graded middle schools. The overarching question of the study was: What is the experience of students from multiage elementary classrooms when they transition to single-grade classrooms at the middle school? To answer this question, the researcher addressed the following sub questions:

1. What are the changes in the nature of student self-concept and self-esteem as measured by Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) for multiage elementary students during the transition to middle school?
2. How do students from multiage elementary classrooms manage the transition?
3. How do students from multiage elementary classrooms manage the academic differences of middle school?

The traditional transition to middle school from elementary school is well documented, and much research has been done in this area to generalize the transition experience of these students. Little is known, however, about the transitional experience of students who move from multiage elementary programs to traditional graded middle schools, as there has been limited research conducted on this transition experience for this specific population, the multiage elementary student, and this study sought to address this
research gap. As much of the research has been strictly qualitative in nature, this study employed a mixed-method research design to collect multiple forms of data in order to yield the best understanding of the transitional experiences of multiage elementary students to single-grade classrooms at the middle school.

Chapter IV presents the results of the analysis of the quantitative and qualitative data collected from students through questionnaires, both standardized and created by the researcher, as well as interviews. Quantitative research questions addressed the impact that the transition had on affective domains. Data was yielded from the Piers-Harris Children’s Self-Concept Scale Second Edition (Piers-Harris 2) and a middle school transition questionnaire. To further explore how the students manage the transition, interviews were conducted to yield qualitative data. The research was conducted with a total of 8 students and began during the fall of the students’ seventh grade year and continued throughout the school year, with the researcher meeting with students in the winter and spring so as to fully examine the effects of the transition as the students were experiencing it.

Participants

The students involved in this research study had previously attended the same elementary school which utilized a multiage classroom model for at least three years prior to transitioning to the middle school as a seventh grader. Students were given options for their participation in the research study. Students could elect to participate in the questionnaire portion only, the interview portion only, or to participate in both the questionnaire and interview portions. Of the eight students who agreed to participate in
the research study, seven students agreed to participate in both the questionnaire and interview portions of the study. One student agreed to only participate in the questionnaire portion of the study. Of the eight students participating in the study, five were female (62.5%) and three were male (37.5%). In terms of race, the students involved in the study were reflective of the school’s demographics and included: three White students (37.5%), three Hispanic (37.5%) students, and two Asian (25%) students.

Research Subquestion #1

Validity of Piers-Harris 2 Scores

In order to interpret the Piers-Harris 2, the first step is to determine whether or not the “responses are valid indicators of the child’s self-evaluations” (Piers & Herzberg, 2002, p. 18). There are four types of validation issues that need to be considered: exaggeration, response bias, random representing, and moderator variables (Piers & Herzberg, 2002).

Validity and exaggeration. With regard to exaggeration, it is a “deliberate attempt by a child to distort his or her answers to produce a given effect” (Piers & Herzberg, 2002, p. 18). Children may distort answers to create positive or negative images of themselves for the adult reader. It is not uncommon for children to distort answers in a more socially desirable direction, and should not be interpreted as deceit or problematic. It is necessary, however, to determine the extent of the distortion and how the child’s age or the context for taking the test might have impacted the child’s ability to complete the questionnaire. The Total (TOT) score can provide some information about a positive response distortion. TOT scores of 66T or above should be given more
consideration when determining the validity of the responses as such scores could indicate that a child feels the need to appear extremely self-confident or lacks the ability to truly assess him or herself. Negative exaggeration on the Piers-Harris 2 is rare, and low self-reported scores do reflect truly low self-esteem.

TOT scores in the fall ranged from 36T to 61T. The scores in the winter ranged from 33T to 66T and in the spring the scores ranged from 38T to 66T. As there were no student TOT scores of 66T or above in any of the three sessions, fall, winter, or spring, it was unlikely that the students positively exaggerated their answer; therefore student responses can be considered to be valid indicators of their self-evaluations.

Validity and response bias. Response bias is another area of validity that must be examined. This refers to a “tendency to agree or disagree with test items, irrespective of content” (Piers & Herzberg, 2002, p. 18). With a positive-response bias, children tend to answer yes to the Piers-Harris 2 items regardless of the content of the statement. With a negative-response bias, children tend to answer “no” to the Piers-Harris 2 items regardless of the content of the statement. The Piers-Harris 2 contains items phrased to detect such biases. The Response Bias (RES) index is a count of the number of “yes” responses. Higher RES scores indicate a tendency toward positive response bias, and lower RES scores indicate a tendency toward negative response bias. A RES score of 40 or above or 18 or below indicate that the student’s answers may be unreliable and that it may be appropriate to readminister the assessment.

In the fall RES scores ranged from 20 to 33. Scores in the winter ranged from 19-33. Finally, spring scores ranged from 23 to 36. As there were no student RES scores of
40 or above or 18 or below in any of the three sessions, fall, winter, or spring, it is unlikely that response bias was a factor when students responded to the questionnaire. Therefore, the Piers-Harris 2 responses can be considered to be valid indicators of their self-evaluations.

**Validity and random responding.** Yet another area to examine for validity of student responses is random responding. On the Piers-Harris 2, certain combinations of responses are “infrequent, logically inconsistent, or both” (Piers & Herzberg, 2002, p. 18). When many inconsistent response pairs are present, it may indicate that the student responded randomly. The Inconsistent Responding (INC) index was developed to detect random response patterns. The index consists of 15 pairs of item response items that are logically inconsistent and occurred as paired responses for less than 10% of the standardization sample (Piers & Herzberg, 2002). A raw score of 4 or more on the INC scale suggests that student may have responded randomly to the items on the questionnaire.

In the fall, student INC scores were either 0 or 1. In the winter INC scores ranged between 0 and 2. Spring INC scores were primarily 0, with one student INC score of 1. As there were no student INC scores of 4 in any of the three sessions, fall, winter, or spring, it is unlikely that random response was a factor when students responded to the questionnaire. Therefore, the Piers-Harris 2 responses can be considered to be valid indicators of their self-evaluations.

**Validity and moderator variables.** The last area to consider when interpreting the validity of Piers-Harris 2 scores is moderator variables. Researchers have examined
whether variables such as sex, age, or ethnicity moderate scores on self-concept tests.
The standardization study of the Piers-Harris 2 revealed that variables such as age, sex, ethnicity, socioeconomic status, and U.S. geographic region did not have any significant moderating effects on the scores; therefore, the Piers-Harris 2 norm-referenced standard scores can be used with students of diverse backgrounds (Piers & Herzberg, 2002). As there were no special populations beyond those included in the norming study included in this study, it is reasonable to conclude that moderator variables are not a factor when interpreting student scores.

Conclusions about validity. As the student scores on the Piers-Harris 2 passed all four validity constructs, it is assumed that the scores reported by students are valid and can be analyzed in order to determine the nature of the students’ self-concept and self-esteem during the transition as measured by the Piers-Harris 2.

Piers-Harris 2 Data Analysis: Total (TOT) Score

The most reliable measure on the Piers-Harris 2, and the one with the best research support, is the TOT score or Total Score. On this instrument, scores within the range of 40T to 59T are considered average or within normal limits. The TOT score means for all three testing sessions fell into the average TOT score range for the Piers Harris 2.

A repeated measures ANOVA was used to determine if the time period of the transition to middle school had an effect on student’s TOT score or score on the domains on the Piers Harris 2. For the TOT score and all domain scores, a Mauchly’s Test of Sphericity was conducted. The results of all the tests were not statically significant for a
$p$ value of .05. Thus, it is reasonable to conclude that the variances of differences are not significantly different.

Table 1

*Mean Piers-Harris 2 TOT and Domain Scores (with Standard Deviations in Parentheses)*

<table>
<thead>
<tr>
<th>Piers-Harris 2 Test Domain</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOT</td>
<td>50.88 (8.92)</td>
<td>53.25 (10.36)</td>
<td>57.38 (9.49)</td>
</tr>
<tr>
<td>BEH</td>
<td>52.75 (8.46)</td>
<td>55.50 (8.68)</td>
<td>57.38 (6.74)</td>
</tr>
<tr>
<td>INT</td>
<td>50.63 (9.91)</td>
<td>51.25 (7.81)</td>
<td>53.75 (7.01)</td>
</tr>
<tr>
<td>PHY</td>
<td>48.12 (10.30)</td>
<td>51.63 (9.98)</td>
<td>57.13 (8.98)</td>
</tr>
<tr>
<td>POP</td>
<td>50.25 (9.36)</td>
<td>53.13 (11.46)</td>
<td>52.63 (10.24)</td>
</tr>
<tr>
<td>FRE</td>
<td>50.38 (9.36)</td>
<td>54.00 (10.40)</td>
<td>57.88 (9.69)</td>
</tr>
<tr>
<td>HAP</td>
<td>48.63 (5.40)</td>
<td>51.75 (8.68)</td>
<td>55.00 (6.05)</td>
</tr>
</tbody>
</table>

*Note:* N=8

**ANOVA analysis of TOT score.** A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the TOT score on the Piers-Harris 2 in fall, winter and spring. There was a significant effect of time period, $F(2,14) = 4.88, p = .025, \eta^2 = .41$. The results showed a statistically significant linear trend for the TOT score over the three time periods, $F(1,7) = 7.39, p = .03, \eta^2 = .51$. Thus, the mean TOT score increased in a linear fashion over the course of the transitional year.

**Post hoc analysis for TOT score.** Three paired samples t-tests were used to make post hoc comparisons between conditions. An adjustment for multiple comparisons was made using the Bonferroni method. A first paired samples t-test indicated that there was
no significant difference in the mean scores for the fall time period to the winter time period (see Table 2). A second paired samples t-test indicated that there was no significant difference in the mean scores for winter time period to the spring time period (see Table 2). A third paired samples t-test indicated that there was no significant difference in the mean scores for the fall time period to the spring time (see Table 2). The results suggest that a student’s TOT score will follow an increasing linear path. However, there is no real difference in TOT scores when the time periods of the transition are compared.

Table 2

Post Hoc Comparisons Between Mean TOT Scores for Seasons

<table>
<thead>
<tr>
<th>Season</th>
<th>Mean</th>
<th>SD</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>50.88</td>
<td>8.92</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Winter</td>
<td>53.25</td>
<td>10.36</td>
<td></td>
<td>NS</td>
</tr>
<tr>
<td>Spring</td>
<td>57.38</td>
<td>9.49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: NS = nonsignificant differences between pairs of means. * $p \leq .05$. ** $p \leq .01$

Piers-Harris 2 Data Analysis: Domains

The Piers-Harris 2 also features six domain scales: BEH (Behavioral Adjustment), INT (Intellectual and School Status), PHY (Physical Appearance and Attributes), FRE (Freedom from Anxiety), POP (Popularity), and HAP (Happiness and Satisfaction).

These scales are reflective of the idea that a person cannot simply be characterized by a global view of themselves, but rather that a person’s self-concept is multidimensional, and can be characterized by appraisals of a variety of feelings, abilities and behaviors.
Thus, repeated measures ANOVAS were calculated for each domain to determine if the time period of the middle school transition had an effect on the domain score.

**Piers-Harris 2 Domain Score Analysis: Behavioral Adjustment (BEH)**

The BEH score indicates the admission or denial of problematic behaviors. On this instrument, domain scores within the range of 40T to 55T are considered average or within normal limits, meaning that the child is fairly well-behaved, but acknowledges a few difficulties with their conduct. The mean BEH score for the fall fell into the average BEH score range for the Piers-Harris 2, and the winter and spring BEH mean scores fell into the above average range for the Piers-Harris 2 (see Table 1).

**ANOVA analysis of BEH score.** A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the BEH score on the Piers-Harris 2 in fall, winter and spring. The results of the test were nonsignificant, \( p = .13 \). Thus, there is no effect of the time period of the middle school transition on the BEH score on the Piers-Harris 2.

**Piers-Harris 2 Domain Score Analysis: Intellectual and School Status (INT)**

The INT score reflects a child’s assessment of his or her academic and intellectual abilities; it also addresses general satisfaction with school and future expectations about achievement. On this instrument, domain scores within the range of 40T to 55T are considered average or within normal limits, meaning that the child believes that he or she is performing is acceptably academically, but acknowledges a few difficulties with school-related tasks. The INT score means for all three testing sessions fell into the average range for the Piers-Harris 2 (see Table 1).
ANOVA analysis of INT score. A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the INT score on the Piers-Harris 2 in fall, winter and spring. The results of the test were nonsignificant, \( p = .40 \). Thus, there is no effect of the time period of the middle school transition on the INT score on the Piers-Harris 2.

Piers-Harris 2 Domain Score Analysis: Physical Appearance and Attributes (PHY)

The PHY score reflects a child’s appraisal of his or her physical appearance, as well as attributes such as leadership and the ability to express ideas. On this instrument, domain scores within the range of 40T to 55T are considered average or within normal limits. A child scoring in this range reports both positive and negative appraisals of his or her appearance, with more positive evaluations than negative evaluations. The PHY mean scores in the fall and winter fell into the average range for the Piers Harris 2 and the spring PHY mean score fell into the above average range for the Piers Harris 2 (see Table 1).

ANOVA analysis of PHY score. A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the PHY score on the Piers-Harris 2 in fall, winter and spring. There was a significant effect of time period, \( F(2,14) = 4.4, p = .03, \eta^2 = .39 \). The results showed a statistically significant linear trend for the PHY score over the three time periods \( F(1,7) = 7.82, p = .027, \eta^2 = .53 \). Thus, the mean PHY score increased in a linear fashion over the course of the transitional year.
Table 3

Post Hoc Comparisons Between Mean PHY Scores for Seasons

<table>
<thead>
<tr>
<th>Season</th>
<th>Mean</th>
<th>SD</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>48.13</td>
<td>10.30</td>
<td>NS</td>
<td>*</td>
</tr>
<tr>
<td>Winter</td>
<td>51.63</td>
<td>9.96</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>57.13</td>
<td>8.98</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: NS = nonsignificant differences between pairs of means. * p≤ .05. ** p≤ .01

Post hoc analysis for PHY score. Three paired samples t-tests were used to make post hoc comparisons between conditions. An adjustment for multiple comparisons was made using the Bonferroni method. A first paired samples t-test indicated that there was no significant difference in the mean scores for the fall time period to the winter time period (see Table 3). A second paired samples t-test indicated that there was no significant difference in the mean scores for winter time period to the spring time period (see Table 3). A third paired samples t-test indicated that there was a significant difference in the mean scores for the fall time period to the spring time period (see Table 3). These results suggest that the time period of the transition has an effect on PHY scores. Specifically, the results suggest that a student’s PHY score will follow an increasing linear path over the course of the transitional year. The time period of the transition has an effect on a student’s PHY score. Thus, students will have higher PHY scores in the spring than in the fall, meaning that students’ sense of physical attractiveness and leadership abilities improves over the course of the transitional year.
**Piers-Harris 2 Domain Score Analysis: Freedom from Anxiety (FRE)**

The FRE score indicates a child’s level of anxiety. Feelings such as worry, nervousness, shyness, sadness, fear, and a general feeling of being left out of things are addressed. On this instrument, domain scores within the range of 40T to 55T are considered average or within normal limits, meaning that the child reports mostly positive feelings, but acknowledges a few difficulties related to their mood. The FRE mean scores in the fall and winter fell into the average range for the Piers-Harris 2; the spring FRE mean score fell into the above average range for the Piers-Harris 2 (see Table 1).

**ANOVA analysis of FRE score.** A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the FRE score on the Piers-Harris 2 in fall, winter and spring. There was a significant effect of time period, \(F(2,14) = 8.68, p = .004, \eta^2 = .24\). The results showed a statistically significant linear trend for the FRE score over the three time periods \(F(1,7) = 11.67, p = .011, \eta^2 = .63\). Thus, the mean FRE score increased in a linear fashion over the course of the transitional year.

Table 4

*Post Hoc Comparisons Between Mean FRE Scores for Seasons*

<table>
<thead>
<tr>
<th>Season</th>
<th>Mean</th>
<th>SD</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>50.38</td>
<td>9.36</td>
<td>NS</td>
<td>*</td>
</tr>
<tr>
<td>Winter</td>
<td>54.00</td>
<td>10.42</td>
<td></td>
<td>NS</td>
</tr>
<tr>
<td>Spring</td>
<td>57.88</td>
<td>9.69</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: NS = nonsignificant differences between pairs of means. * \(p \leq .05\), ** \(p \leq .01\)*
**Post hoc analysis for FRE score.** Three paired samples t-tests were used to make post hoc comparisons between conditions. An adjustment for multiple comparisons was made using the Bonferroni method. A first paired samples t-test indicated that there was no significant difference in the mean scores for the fall time period to the winter time period (see Table 4). A second paired samples t-test indicated that there was no significant difference in the mean scores for winter time period to the spring time period (see Table 4). A third paired samples t-test indicated that there was a significant difference in the mean scores for the fall time period to the spring time period (see Table 4). These results suggest that the time period of the transition has an effect on FRE scores. Specifically, the results suggest that a student’s FRE score will follow an increasing linear path over the course of the transitional year. The time period of the transition has an effect on a student’s FRE score. Thus, students will have higher FRE scores in the spring than in the fall, meaning that students’ sense of anxiety lessens over the course of the transitional year.

**Piers-Harris 2 Domain Score Analysis: Popularity (POP)**

The POP score indicates a child’s sense of his or her social functioning. It covers perceived popularity, ability to make friends, and feelings of inclusion in games and sports. On this instrument, domain scores within the range of 40T to 55T are considered average or within normal limits, meaning that the child is mostly satisfied with his or her social functioning, but acknowledges a few difficulties with peer relationships. The POP score means for all three testing sessions fell into the average POP score range for the Piers-Harris 2 (see Table 1).
ANOVA analysis of POP score. A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the POP score on the Piers-Harris 2 in fall, winter and spring. The results of the test were nonsignificant, $p = .31$. Thus, there is no effect of the time period of the middle school transition on the POP score on the Piers- Harris 2.

Piers-Harris 2 Domain Score Analysis: Happiness and Satisfaction (HAP)

The HAP score reflects feelings of happiness satisfaction with life. On this instrument, domain scores within the range of 40T to 55T are considered average or within normal limits, with positive evaluations outnumbering negative evaluations. The HAP score means for all three testing sessions fell into the average HAP score range for the Piers-Harris 2 (see Table 1).

ANOVA analysis for HAP score. A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the HAP score on the Piers-Harris 2 in fall, winter and spring. There was a significant effect of time period, $F(2,14) = 4.04, p = .041, \eta^2 = .37$. The results showed a statistically significant linear trend for the HAP score over the three time periods, $F(1,7) = 17.26, p = .004, \eta^2 = .71$. Thus, the mean FRE score increased in a linear fashion over the course of the transitional year.
Table 5

*Post Hoc Comparisons Between Mean HAP Scores for Seasons*

<table>
<thead>
<tr>
<th>Season</th>
<th>Mean</th>
<th>SD</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>50.25</td>
<td>5.40</td>
<td>NS</td>
<td>*</td>
</tr>
<tr>
<td>Winter</td>
<td>53.13</td>
<td>8.68</td>
<td></td>
<td>NS</td>
</tr>
<tr>
<td>Spring</td>
<td>52.63</td>
<td>6.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* NS = nonsignificant differences between pairs of means. *p ≤ .05. **p ≤ .01

Post hoc analysis scores for HAP score. Three paired samples t-tests were used to make post hoc comparisons between conditions. An adjustment for multiple comparisons was made using the Bonferroni method. A first paired samples t-test indicated that there was no significant difference in the mean scores for the fall time period to the winter time period (see Table 5). A second paired samples t-test indicated that there was no significant difference in the mean scores for winter time period to the spring time period (see Table 5). A third paired samples t-test indicated that there was a significant difference in the mean scores for the fall time period to the spring time period (see Table 5). These results suggest that the time period of the transition has an effect on HAP scores. Specifically, the results suggest that a student’s HAP score will follow an increasing linear path over the course of the transitional year. The time period of the transition has an effect on a student’s HAP score. Thus, students will have higher HAP scores in the spring than in the fall, meaning that students’ sense of happiness improves over the course of the transitional year.
Research Subquestion #2

In order to determine the specific concerns of the students during the transition, a questionnaire was given to students at three points during the transitional year: fall, winter, and spring. As no standardized middle school transition questionnaire exists, the researcher developed a questionnaire. Following the work of Diemert (1992), questions were developed in three survey categories: 1) academic, 2) procedural, and 3) social. Students were asked to rate their level of concern using a Likert scale with the following ratings: 1="Not Concerned or Worried”, 2=”A Little Concerned or Worried”, 3=”No Opinion”, 4=”Concerned or Worried”, 5= “Very Concerned or Worried.”

Table 6

Mean Procedures/Rules Scores for Seasons (with Standard Deviations in Parentheses)

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing the school rules</td>
<td>1.75 (1.49)</td>
<td>1.25 (.71)</td>
<td>1.0 (.00)</td>
</tr>
<tr>
<td>Changing/finding class</td>
<td>2.0 (.93)</td>
<td>1.13 (.35)</td>
<td>1.25 (.46)</td>
</tr>
<tr>
<td>Knowing how to behave in different teachers’ classrooms</td>
<td>1.75 (1.17)</td>
<td>1.25 (.71)</td>
<td>1.13 (.35)</td>
</tr>
<tr>
<td>Knowing when I can go to my locker</td>
<td>2.13 (1.46)</td>
<td>1.38 (.74)</td>
<td>1.25 (.46)</td>
</tr>
<tr>
<td>Keeping track of my materials</td>
<td>2.5 (.93)</td>
<td>2.0 (.76)</td>
<td>1.5 (.54)</td>
</tr>
<tr>
<td>Being late to class</td>
<td>2.0 (1.41)</td>
<td>1.63 (1.06)</td>
<td>1.25 (.46)</td>
</tr>
<tr>
<td>Summative Procedures/Rules</td>
<td>2.02 (1.21)</td>
<td>1.44 (.77)</td>
<td>1.23 (.42)</td>
</tr>
</tbody>
</table>
Table 6 illustrates the descriptive statistics for the procedures/rules statements on the fall, winter and spring questionnaires. Since a score of 5 indicates the highest level of worry or concern and 1 was the lowest level of worry or concern, 3 is considered the midpoint. Therefore, participant responses on questionnaire items with a mean of 3.0 or greater indicate a high level of concern or worry, and responses with means less than 3.0 are indicate a low level of concern or worry. In the fall, there were no procedural areas that were a concern or worry to students. In the winter, there were no procedural areas that were a concern or worry to students. In the spring, there were no procedural areas that were a concern or worry to students.

**ANOVA Analysis of Procedure/Rule Concerns**

A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the mean summative procedure/rules score on the middle school transition questionnaire in the fall, winter and spring. The mean of the summative procedure/rules score was calculated using the sum of all individual student responses for the questions in the procedure/rules section of questionnaire for each season. A Mauchly’s Test of Sphericity was conducted. The results of all the tests were not statically significant for a $p$ value of .05. Thus, it is reasonable to conclude that the variances of differences are not significantly different.

There was a significant effect of time period for the summative procedure/rules concerns $F(2, 94) = 13.45, p = .00, \eta^2 = .20$. The results showed a statistically significant linear trend for the summative procedure/rules concerns over the three time periods,
F(1,47) = 19.13, \( p = .00 \), \( \eta^2 = .29 \). Thus, the mean summative procedure/rules concern score decreased in a linear fashion over the course of the transitional year.

Table 7

Post Hoc Comparisons Between Mean Summative Procedures/Rules Scores for Seasons

<table>
<thead>
<tr>
<th>Season</th>
<th>Mean</th>
<th>SD</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>2.02</td>
<td>1.21</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Winter</td>
<td>1.44</td>
<td>.77</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>1.23</td>
<td>.42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: NS = nonsignificant differences between pairs of means. * \( p \leq .05 \). ** \( p \leq .01 \)

Post Hoc Analysis for Mean Summative Procedures/Rules Scores

Three paired samples t-tests were used to make post hoc comparisons between conditions. An adjustment for multiple comparisons was made using the Bonferroni method. A first paired samples t-test indicated that there was a significant difference in the mean scores for the fall time period to the winter time period (see Table 7). A second paired samples t-test indicated that there was no significant difference in the mean scores for winter time period to the spring time period (see Table 7). A third paired samples t-test indicated that there was a significant difference in the scores for the fall time period to the spring time period (see Table 7). These results suggest that the time period of the transition has an effect on the students’ concern or worry with procedures/rules. Specifically, the results suggest that a student’s level of concern will follow a decreasing linear path over the course of the transitional year. Thus, students will have higher levels of concern with procedure/rules in the fall than the spring, meaning that students’ sense
of worry or concern with academics decreases over the course of the transitional year, with significant decreases occurring from fall to winter and fall to spring.

**Table 8**

*Mean Social Life Scores for Seasons (with Standard Deviations in Parentheses)*

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being around older students</td>
<td>1.00 (.00)</td>
<td>1.5 (.76)</td>
<td>1.0 (.00)</td>
</tr>
<tr>
<td>Being bullied or teased</td>
<td>2.25 (1.59)</td>
<td>1.63 (1.19)</td>
<td>1.63 (1.19)</td>
</tr>
<tr>
<td>Being in classes with students from other elementary schools</td>
<td>1.25 (.46)</td>
<td>1.13 (.35)</td>
<td>1.13 (.35)</td>
</tr>
<tr>
<td>Knowing who I will sit with at lunch</td>
<td>1.63 (.92)</td>
<td>1.75 (1.49)</td>
<td>1.38 (.74)</td>
</tr>
<tr>
<td>Being in classes with my friends</td>
<td>2.22 (1.55)</td>
<td>1.88 (1.25)</td>
<td>1.25 (.46)</td>
</tr>
<tr>
<td>Making new friends</td>
<td>2.25 (1.83)</td>
<td>1.5 (1.41)</td>
<td>1.38 (1.06)</td>
</tr>
<tr>
<td>Having a teacher I can talk to when I have problems</td>
<td>2.25 (1.39)</td>
<td>1.88 (.99)</td>
<td>1.13 (.35)</td>
</tr>
<tr>
<td>Summative Social Life Score</td>
<td>1.89 (1.29)</td>
<td>1.61 (1.09)</td>
<td>1.27 (.70)</td>
</tr>
</tbody>
</table>

Table 8 illustrates the descriptive statistics for the social life statements on the fall, winter and spring questionnaires. Since a score of 5 indicates the highest level of worry or concern and 1 was the lowest level of worry or concern, 3 is considered the midpoint. Therefore, participant responses on questionnaire items with a mean of 3.0 or greater indicate a high level of concern or worry, and responses with means less than 3.0 are indicate a low level of concern or worry. The responses of students to the statements
indicate that they did not have concern or worry with social life during the initial period of the transitional year. In the winter, there were no social life areas that were a concern or worry to students. In the spring, there were no social life areas that were a concern or worry to students.

**ANOVA Analysis of Summative Social Life Concerns**

A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the students’ responses to the social life statements on the middle school transition questionnaire in fall, winter and spring. The mean of the summative social life score was calculated using the sum of all individual student responses for the questions in the social life section of questionnaire for each season. There was a significant effect of time period for summative social life concerns, \( F(2,110) = 9.18, p = .00, \eta^2 = .14 \). The results showed a statistically significant linear trend for the summative social life concerns over the three time periods, \( F(1,55) = 10.94, p = .00, \eta^2 = .20 \). Thus, the mean summative social life concern score decreased in a linear fashion over the course of the transitional year.

Table 9

*Post Hoc Comparisons Between Mean Summative Social Life Scores for Seasons*

<table>
<thead>
<tr>
<th>Season</th>
<th>Mean</th>
<th>SD</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>1.89</td>
<td>1.29</td>
<td>NS</td>
<td>**</td>
</tr>
<tr>
<td>Winter</td>
<td>1.61</td>
<td>1.09</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Spring</td>
<td>1.27</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* NS = nonsignificant differences between pairs of means. * \( p \leq .05 \). ** \( p \leq .01 \)
Post Hoc Analysis for Mean Summative Social Life Scores

Three paired samples t-tests were used to make post hoc comparisons between conditions. An adjustment for multiple comparisons was made using the Bonferroni method. A first paired samples t-test indicated that there was no significant difference in the mean scores for the fall time period to the winter time period (see Table 9). A second paired samples t-test indicated that there was a significant difference in the mean scores for winter time period to the spring time period (see Table 9). A third paired samples t-test indicated that there was a significant difference in the mean scores for the fall time period to the spring time period (see Table 9). These results suggest that the time period of the transition has an effect on the students’ concern or worry with social life statements. Specifically, the results suggest that a student’s level of concern will follow a decreasing linear path over the course of the transitional year. Thus, students will have higher levels of concern in the fall than the spring, meaning that students’ sense of worry or concern with regard to this social life decreases over the course of the transitional year, with significant decreases during the time periods of winter to spring and fall to spring.

Interview Analysis

In order to obtain qualitative data about students’ transition experience, student interviews were conducted during the fall, winter, and spring. During the interview process, students were asked open-ended questions. Restatement of questions or more probing questions based on student responses were used to further develop responses. In the fall students were asked about the immediate issues that they were facing during the initial phases of the transition. In the winter, students were asked questions about
what was still an issue for them and what had changed since the first round of interviews. In the spring, students were asked questions to help them reflect about their transition experience.

The data from the student interviews was analyzed using a multi-step process as outlined by Creswell (2009). The process can be summarized in the following four steps: (a) organizing and preparing the data, (b) clarifying the data by reading and taking notes, (c) classifying and interpreting the data through a coding process and (d) generating and identifying themes.

At the onset of the analysis of the interview data, the interviews were analyzed in the context of the time period of the transition to middle school in which the interviews were conducted; in this manner, the fall interviews were analyzed separately from the winter interviews and spring interviews. In this way, the researcher could determine themes for each of the time periods during the transition to middle school. To keep the interview data in alignment with the student transition questionnaire data, student responses were initially coded into the following categories: 1) academic, 2) procedural, and 3) social. From there, sub-categories and themes were identified. The following major categories emerged: (a) adjusting to the structure of middle school, (b) adjusting to new academic demands, (c) managing relationships with teachers and peers, and (d) changing sense of self.

When analyzing the data gathered from the fall interviews, it became apparent that the students were primarily concerned with topics relating to academics and procedures. These concerns lessened over the course of the year and developed into a
focus on the social aspect of the transitional year, with a specific focus on changing relationships with teachers and peers.

**Adjusting to the Structure of Middle School**

The theme of adjusting to the structure of middle school correlates to the procedure/rules section of the middle school transition questionnaire, which addresses the spectrum of experiences that students encounter with regard to the rules and procedures that govern the middle school. The data collected in the interviews parallels the data collected in the middle school transition questionnaire. Just as the students’ concerns as with procedures/rules as indicated on the middle school transition questionnaire decreased over the course of the year from fall to spring, the procedural concerns expressed during the interviews decreased; students expressed several concerns with procedures/rules during the fall interview sessions and procedural responses were less frequent during the winter and spring.

**The pace of the day.** When students were asked in the fall about what differences that they noticed between elementary school and middle school, they indicated that they felt the pace of the school day was different. Due to the fact that they had to regularly change class periods throughout the course of the school day and navigate a much larger school building, students felt the pace of the day was faster and more difficult to manage in middle school than in elementary school. Students commented:

Student #5: It’s harder. It’s shorter.

Student #6: Uh, it seems the day, the day seems to go by a lot faster because you get different teachers and you see lots going on and like (pause).
Researcher: So it goes by pretty quickly.

**Getting to classes.** Students were asked about the greatest differences that they noticed when transitioning to the middle school and they responded:

Student #5: The homework and remembering the combinations to the lockers.

Researcher: So you have a lot more things to remember? And then in math is the content harder or the amount of work harder?

Student #5: The amount of work harder.

Student #1: Um. It’s different because (pause) you have to know where you’re going and be responsible enough to bring all your stuff you need to your classes.

At the beginning of the year, students indicated that they felt that they had more to remember such as locker combinations and bringing their materials to class. As elementary students they were able to stay in one classroom and keep their materials in a backpack. With the introduction of lockers, students had to manage their time as well as their materials.

When students were asked about how the staff at the middle school could have helped them more readily adjust to getting to classes and developing the skill of going to their lockers and bringing materials to class and some suggested that the school should have allowed them some time to practice, perhaps during the summer before the school year started. While the school in the study made an attempt to provide a “scavenger hunt” activity to familiarize the students with the school, the students did not perceive it as being helpful, commenting:

Student #2: Uh, if I knew where all my classes were at the beginning of the year because I got really confused going from class to class, that’s the only thing. Everything else is fine. But, if I would’ve known where all my classes were, like
if I would’ve been able to go in over the summer and like practice going from class to class and well if I knew where my locker was and stuff like that I could practice, then it would be a whole lot easier when school started. Because at the beginning of the year the first like two weeks, I had like no clue where I was going. I was the biggest fool in the world.

Student #3: I go to my locker and everything.

Researcher: So, you’ve kinda figured out a schedule and routine. You’ve figured that all out now.

Student #3: Yeah.

Researcher: Was that hard at first?

Student #3: Uh-huh.

Researcher: So, did they take you on a tour of the building at first?

Student #3: Oh no. Like, they, we just had, like, this scavenger hunt thing.

Researcher: OK. Do you think that might have helped you?

Student #3: Yeah, a little bit.

**Adjusting to New Academic Demands**

**Use of textbooks.** Students commented on adjusting to the type of instruction offered at the middle school. As is typical of many multiage classrooms, the students had not used textbooks in elementary school. When asked about the differences, students commented:

Student #5: Because there’s a textbook rather just giving a worksheet.

Student #2: Yeah, well homework…and not having um well now for homework we there is a big, uh, textbook we can take home and help us. Last year we didn’t have any textbooks that were assigned to us except for our math book. We were assigned worksheets. Now we have to write down questions from the book and then answer them on a on a separate paper.
While students noted this difference, using textbooks did not seem to concern them, and they readily adapted to the change in instructional methodology.

Increase in homework. In addition to the introduction of textbooks, students had to adjust to the increase in homework, feeling that the homework load in middle school had not only increased in the amount of homework that they received, but also in the level of difficulty and time required to complete it. Students found this change in homework to be stressful and to some “overwhelming.” In the fall students, students said:

Student #2: Um. Overall, I’m (pause) probably (pause) doing alright. But the homework thing is kinda stressing me out because last year it was like I could finish it like that. I wouldn’t have to. I would spend maybe thirty minutes tops doing homework and now I have about an hour’s worth but because now I’m more stressed about it now because I have more to do and I’m not used to having that much homework to do and it’s a little bit scary when like you see on the board the assignments.

Researcher: OK. If you could change one thing right now about being a 7th grader, what would it be?

Student #6: Probably less homework.

When the students were interviewed in the winter, homework continued to be a concern for students. When asked about their concerns, students responded:

Researcher: So the last time that we talked, you mentioned that you were maybe concerned with work, like getting good grades and the amount of work. So are those still concerns for you?

Student #2: Yeah. They are.

Researcher: Why’s that?

Student #2: Um, because compared to last year, last year was, um, there was probably one page of homework a night, and now there’s probably three or four.
And, timewise, it takes longer and I’m not really used to that. I’m still trying to, um, adapt.

Student #2: Probably the amount of work. I mean, the amount of effort you have to put into things. Now I’m, it’s like I’m being slapped in the face. You have to focus. You can’t just breeze through this, like if without thinking on certain worksheets, you’re not gonna finish. You have to put more effort in every day, more than elementary school. And, that’s it.

Researcher: Previously, you said that you were concerned about getting good grades. Are these things that you’re still concerned with? Or?

Student #3: No, because I have A’s in math and good things. So, yeah.

Researcher: OK, so you’re getting good grades, so it’s not so much of a worry anymore?

Student #3: No.

Researcher: Why were you worried at the beginning?

Student #3: Well, because I wasn’t getting an A in math and orchestra.

Researcher: OK, so now you’ve managed. What was the difference in terms of getting your grades up?

Student #3: Um, well, I just had to work a little bit harder.

Researcher: OK.

Student #3: Remember to do my homework and everything.

Student #5: Like, you get a lot of homework, a lot more assignments.

Researcher: Most of it’s math. Are you managing to get your work done?

Student #5: Sometimes.

Researcher: Sometimes. Does it make it hard? Sometimes you don’t get it done. Is that hard sometimes?

Student #5: (student mumbles).
Researcher: Alright, the last time we talked, well, you had mentioned that you felt like school was kinda stressful. I think you said “overwhelming.” So how are things right now?

Student #8: They’re going a little bit better, like, um, homework and getting up earlier. It has been better for me cuz I’ve started, like, changing, like adapting to the time and all the assignments.

**Change in teacher expectations.** Not only did students find the change in homework load to stressful, students believed that their middle school teachers had different expectations for the homework than their elementary teachers. There was a feeling among the students that their elementary teachers were not as strict about homework completion and perhaps had lower expectations for the completion of the work. This change in teacher expectations also caused distress for some students.

Student #6: Uh, they expect you to do your work more than they do in elementary school, so yeah.

Researcher: Ok, so overall, how would you describe your first year in middle school?

Student #2: Um, it’s been like, (pause) it’s been crazy, like there would be times where I’d be way behind in math and then, like, I would catch up and get somewhat behind and then I would catch up and now I’m like on top of everything. Because before I didn’t really think it was as big of a deal as big as it was last year.

**Managing Relationships with Teachers and Peers**

The theme of managing relationships with teachers and peers correlates to the social life section of the middle school transition questionnaire, which covers the spectrum of experiences that students encounter with regard to their relationships with teachers and peers. Social life issues include: bullying, being in class with friends, making new friends, and having a teacher to talk to about problems.
**Perception of teachers.** Social relationships with teachers and peers become more of a concern to students as the year progressed. While interview responses in the fall and winter largely focused on academic and procedural issues, the spring interviews were focused on social issues. When students were asked to describe the differences that they noticed between their elementary teachers and their middle school teachers, students felt that their elementary school teachers were less knowledgeable than their middle school teachers. Students responded:

Student #1: The teachers in elementary school were (pause), um, more strict and they knew all not as much things about different subjects as a lot about one.

Student #2: The teacher I had before (pause). Well, the teachers here are a lot smarter because last year they were, um, they were trained to do all many different. The teachers here are trained to do one subject and they know a lot more about it than my old teachers. So the teachers this year are, um, I would say that they could relate to us better. For some reason, I’m not sure why, but last year the teachers were more (pause). I don’t know. They were just different.

While students felt their middle school teachers were more knowledgeable than their elementary teachers, they struggled to connect with their middle school teachers in the same way that they had with their elementary school teachers. Students had the following to say about their relationship with their middle school teachers:

Student #2: Um, I’m not considered teacher’s pet, but I’m not totally against my teachers. Um, I don’t have a, I don’t have a bad reputation with them.

Researcher: OK. Are your teachers different?

Student #3: Uh-huh.

Researcher: How are they different?

Student #3: Well, they don’t call on me as much as they did in elementary school, so.
Researcher: Why do think that is?

Student #3: There’s more students.

Researcher: Uh-huh. How does that make you feel?

Student #3: Um (pause). Well, it doesn’t really (pause) it sorta makes me feel like they’re just not calling on me because they don’t like me or something.

Student #3: Um, it’s not as tight as it used to be like when I was in elementary school because we, we’d only have one teacher, but now I have, like nine teachers.

Researcher: So you’re finding it hard to get close to your teachers?

Student #3: Yeah.

Researcher: And how does that make you feel?

Student #3: Hmmm…kind of alone. Yeah.

Student #8: Um, (pause). I don’t know. Like, still nice to each other and, but, like, some of my language arts teachers are really close because I like to write stuff and they, like, help me with my writing outside of class, too. But, I think with my other teachers not really that close.

Researcher: And, why do you think that is?

Student #8: Um, also, I don’t really talk to teachers outside of school or, like, ask really them for help on, like, problems and stuff.

Researcher: OK. I think the last time we talked, you said that you missed your teachers at elementary school. Do you still feel that way?

Student #8: I still kinda do. Um, because, like, you’d be with the same teacher for two years, so I still feel I kinda like them, so.

**Making new friends.** When asked about how the positives and negatives about the transition to the middle school, students frequently cited the importance that making new friends had on whether or not their experiences were positive. Students who
indicated that they had a positive transition experience, said that is was due to the fact that they had made new friends in middle school.

Researcher: Overall, how would you describe your first year in middle school?

Student #6: Pretty good.

Researcher: What made it pretty good?

Student #6: All the people I met, the friends (pause).

Researcher: Yeah? OK, so overall, how would you describe your first year in middle school? When you look back—1st year, what do you think?

Student #7: Um (pause) Good. Hmmm....

Researcher: What made it good?

Student #7: Um (pause). Hmmm....

Researcher: What’s one thing that stands out as being really good that happened this year?

Student #7: My friends. I made friends and I had some old friends from last year, too.

One student who did not believe that she had a positive middle school transition experience attributed it to her lack of social skills. The discussion occurred as follows:

Researcher: OK, so overall how would you describe your first year in middle school?

Student #8: Uh, describe it kind of terrible. I guess like I could like live through it. It was not as bad as I thought or really.

Researcher: So, what was terrible? What made it?

Student #8: Like (pause).

Researcher: What did you struggle with?
Student #8: Uh, nothing with school. Just like socially, like making new friends, talking to new people and uh….

Researcher: So if you could go back and do it over again, what would you do differently?

Student #8: Try and be more outgoing at the beginning. Try to be better.

**Expanding socially.** When students were asked what advice to give incoming students about making a successful transition to middle school, developing social skills and the willingness to expand socially was frequently mentioned. Students gave the following advice:

Student #2: I would tell them, um, to be nice, especially because if you make one mistake it’s gonna haunt you for the rest of your time at [this school], like you’d probably have to (pause). I’d probably tell them (pause) they need to be open to people meaning like really social because everyone, like, they could feel if you’re talking to somebody and they don’t really know you, they’ll think, “Wow, this person’s talking to me, but I don’t really know them.” Then, it’ll make that person talk to other people that they don’t know because it looks fun meeting people.

Student #3: Um, just meet new people really and try to, like, understand your teachers and everything.

Student #8: Um, to be themselves, not to be afraid of anything. They should do whatever they want to do, like if they wanna make new friends, go ahead. They don’t have to be scared at all.

**Maintaining relationships with friends and teachers at elementary school.** Students reported that they maintained relationships with their friends in the multiage classrooms who had yet to transition to the middle school. These friendships were maintained outside of the school day. Specifically, one student indicated that throughout the transition process it was the one thing that she missed about elementary school and that she could not wait until the following school year when her friends would come to
the middle school. Students reported visiting their elementary school to visit their friends as well as the teachers. Students spoke fondly of their elementary teachers and felt the need to maintain their relationships with their elementary teacher even though they had developed positive relationships with their middle school teachers. One student commented that she missed “getting that one-on-one, instead of treating us like numbers.” With regard to maintaining relationships with the multiage elementary classroom teacher, another student stated the following:

Researcher: OK, is there anything you still miss about being in elementary school or multiage classrooms?

Student #8: Yeah, but I kinda like junior high here more now.

Researcher: OK, what do you miss, though?

Student #8: Uh, I still miss the people I know there and all the teachers that I knew there because I was close with them and, I don’t know, I just don’t feel like I used to.

Researcher: Have you gone back to visit?

Student #8: Yeah, I do go back to visit.

Researcher: How often do you go back to visit?

Student #8: A lot.

Researcher: Yeah?

Student #8: Yeah.

Researcher: Do a lot of the students in your class go back to visit? Like lots of students from your school go back to visit?

Student #8: I know occasionally I go there, like twice a week. I know that, well, like sometimes I will take someone who was in my class there to like visit. So, I guess you could say they do visit too.
Researcher: Why do you…, what do you get out of visiting? Like, why do you like to visit so much?

Student #8: I don’t know. Sometimes when I feel sad or bad about school, it makes me feel better to see all the people and like how they’re doing.

**Changing Sense of Self**

**Feeling older and more mature.** At the beginning of the transitional year, students were asked how they felt about being in middle school, and the students felt older and more mature. When asked how they felt, students said:

Researcher: How do you feel about being a middle school student? So somebody says, “Oh, you’re in middle school.” How does that make you feel?

Student #6: Um, like a little bit older than before and more, like mature.

Researcher: Do you feel older? Do you feel…?

Student #7: Yeah, kind of older, yeah.

Researcher: OK. How do you feel about being a middle school student now? You’re a middle school student, so how does it make you feel?

Student #3: Feels like I’m in charge. If I saw like the elementary kids, I’d look down at them.

Student #2: It makes me feel more mature. Like sometimes I can’t like since I was at my old school for seven years I kinda feel I can’t like every time somebody asks me what school I go to I always say automatically the name of my elementary school. Because that’s what my head is wired to do and it kinda makes me feel like I’m old, a little bit too old like I mean last year we had all kinds of Halloween parties and Christmas parties and now we really don’t do that anymore. And sometimes it makes me feel jealous of my younger brother because he gets all the special treatment that I got and I don’t really have that anymore. I’m really jealous of my little brother because he gets all the stuff that I had and now I feel like I’ve grown up too fast and I want that back. At first I didn’t like it back then, I was like I wanted to get outta there, but now I want to go back there because I look back and realize that it was probably the most fun of the school year.
Feeling older and more mature appeared to be a change that most of them enjoyed, yet there was a sense of nostalgia for some of the things that they enjoyed in elementary school that were more childish such as Halloween and Christmas parties.

**Perception of change over the course of the transitional year.** When the students were asked in the spring if they felt that they had changed over the course of the year, while some students did not feel that they had changed over the course of the year, several students indicated that they had changed socially. They felt that at the beginning of the year they were shier or more reserved, and by the end of the year, they felt that they were more able to socialize and were less shy. Students remarked:

Student #2: Um, well, I’m definitely a lot less shy. I was really shy in the beginning of the year, and I was really like stressed out at the beginning of the year and now I’m just really not anymore because at the beginning of the year, I didn’t know what my teachers expected of me and now I (pause) do? That make sense?

Researcher: Do you talk more in class?

Student #2: Yeah.

Researcher: You’re more comfortable?

Student #2: Yeah, cuz at the beginning of the year, I didn’t wanna, I didn’t wanna push anything. I didn’t wanna talk. I didn’t wanna even look at anyone else and now I feel more comfortable, and ….

Student #2: Um, probably time and getting to know everybody, because, like, in the beginning of the year, you’re not just gonna, unless you’re a really outgoing person, you’re not just gonna make a joke in the middle of class, and now there are people that do that, but in the beginning of the year, the first couple of weeks, no one’s gonna say anything. It’s always gonna be quiet unless you know people from last year, that’s who you’re gonna be talking with.

Researcher: Did you feel that way before?
Student #2: Um, I kinda felt that because, like, no one would talk to me because, like, I was like, cuz it was new and like no one knew each other and like everyone was antisocial at the beginning of the year and stuck to their friends and nobody, like, talked to anyone else, so, but now everyone’s, like, talking to everybody.

Researcher: OK, good. So do you think you’ve changed since the beginning of the year?

Student #6: Yeah.

Researcher: How have you changed?

Student #6: Just changed (pause), like socially.

Researcher: How have you changed socially?

Student #6: Um, I’m not shy to meet new people anymore.

Researcher: Why? Why’s that? Do you think?

Student #6: Because I’ve made new friends this past year.

Researcher: You’ve just gotten more comfortable.

Student #6: Yeah.

Researcher: OK, good. So do you think you’ve changed since the beginning of the year?

Student #8: More like, um, uh, a little bit bolder, like kinda out there, a little bit.

Researcher: In what way?

Student #8: Um, like the ways of like people, and like talk to people socially.

Researcher: OK, so you’re trying to talk to people more and you’re less shy?

Student #8: Uh-huh.

Researcher: And that’s different?

Student #8: Uh-huh.
Researcher: Is that hard?

Student #8: Yeah.

**Research Subquestion #3**

In order to determine the specific concerns of the students during the transition, a questionnaire was given to students at three points during the transitional year: fall, winter, and spring. As no standardized middle school transition questionnaire exists, the researcher developed a questionnaire. Following the work of Diemert (1992), questions were developed in three survey categories: 1) academic, 2) procedural, and 3) social. Students were asked to rate their level of concern using a Likert scale with the following ratings: 1=”Not Concerned or Worried,” 2=”A Little Concerned or Worried,” 3=”No Opinion,” 4=”Concerned or Worried,” 5=”Very Concerned or Worried.”

The theme of adjusting to new academic demands that appeared during the interview analysis correlates to the academic section of the middle school transition questionnaire, which covers the spectrum of experiences that students encounter with regard to grades, the work that is given to students, and the academic structures of middle school to include: multiple teachers, getting additional help from teachers, and the materials and resources used in instruction. The data collected in the interviews parallels the data collected in the middle school transition questionnaire. Just as the students’ concerns as with academics as indicated on the middle school transition questionnaire decreased over the course of the year from fall to spring, the academic concerns expressed during the interviews decreased; students expressed several concerns with
academics during the fall interview sessions and academic responses were less frequent during the winter and spring.

Table 10

*Mean Academic Scores for Seasons (with Standard Deviations in Parentheses)*

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having a new grading system</td>
<td>2.13 (.84)</td>
<td>1.86 (.99)</td>
<td>1.88 (1.13)</td>
</tr>
<tr>
<td>Having more teachers</td>
<td>1.75 (1.04)</td>
<td>1.25 (.46)</td>
<td>1.38 (.74)</td>
</tr>
<tr>
<td>Knowing the amount of homework</td>
<td>2.38 (1.19)</td>
<td>2.0 (.76)</td>
<td>1.63 (1.06)</td>
</tr>
<tr>
<td>Knowing how to get extra help from teachers</td>
<td>1.63 (1.06)</td>
<td>2.13 (1.13)</td>
<td>1.13 (.35)</td>
</tr>
<tr>
<td>Getting good grades</td>
<td>3.38 (1.60)</td>
<td>2.25 (1.49)</td>
<td>2.0 (1.07)</td>
</tr>
<tr>
<td>Summative Academic score</td>
<td>2.25 (1.28)</td>
<td>1.90 (1.03)</td>
<td>1.60 (.93)</td>
</tr>
</tbody>
</table>

Table 10 illustrates the descriptive statistics for the academic statements on the fall, winter and spring transition questionnaire. Since a score of 5 indicates the highest level of worry or concern and 1 was the lowest level of worry or concern, 3 is considered the midpoint. Therefore, participant responses on questionnaire items with a mean of 3.0 or greater indicate a high level of concern or worry, and responses with means less than 3.0 are indicate a low level of concern or worry. In the fall, the only statement that students indicated was a high level of academic concern was “Getting good grades” with a mean of 3.38. The responses of students to the other statements indicate that they did not have concern or worry with academics during the initial period of the transitional year. In the winter, there were no academic areas that were a concern or worry to
students. In the spring, there were no academic areas that were a concern or worry to students.

**ANOVA Analysis of Summative Academics Concerns**

A repeated measures ANOVA was conducted to compare the effect of the time period of the middle school transition on the mean academics score on the middle school transition questionnaire in the fall, winter and spring. The mean of the summative academic score was calculated using the sum of all individual student responses for the questions in the academic section of questionnaire for each season. There was a significant effect of time period for the summative academic concerns $F(2,78) = 5.88, p = .004, \eta^2 = .13$. The results showed a statistically significant linear trend for the summative academic concerns over the three time periods, $F(1,39) = 10.12, p = .003, \eta^2 = .21$. Thus, the mean summative academic concern score decreased in a linear fashion over the course of the transitional year. Just as the students’ concerns as with academics as indicated on the middle school transition questionnaire decreased over the course of the year from fall to spring, the academic concerns expressed during the interviews decreased; students expressed several concerns with academics during the fall interview sessions and academic responses were less frequent during the winter and spring.
Table 11

*Post Hoc Comparisons Between Mean Summative Academic Scores for Seasons*

<table>
<thead>
<tr>
<th>Season</th>
<th>Mean</th>
<th>SD</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>2.25</td>
<td>1.28</td>
<td>NS</td>
<td>**</td>
</tr>
<tr>
<td>Winter</td>
<td>1.9</td>
<td>1.03</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>1.6</td>
<td>.93</td>
<td></td>
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</tbody>
</table>

Note: NS = nonsignificant differences between pairs of means. *p < .05. **p < .01

*Post Hoc Analysis for Academic Mean Scores*

Three paired samples t-tests were used to make post hoc comparisons between conditions. An adjustment for multiple comparisons was made using the Bonferroni method. A first paired samples t-test indicated that there was no significant difference in the mean scores for the fall time period to the winter time period (see Table 11). A second paired samples t-test indicated that there was no significant difference in the mean scores for winter time period to the spring time period (see Table 11). A third paired samples t-test indicated that there was a significant difference in the scores for the fall time period to the spring time period (see Table 11). These results suggest that the time period of the transition has an effect on the students’ concern or worry with academics. Specifically, the results suggest that a student’s level of concern will follow a decreasing linear path over the course of the transitional year. Thus, students will have higher levels of concern with academics in the fall than the spring, meaning that students’ sense of worry or concern with academics decreases over the course of the transitional year.
Summary

This chapter presented the findings of the analysis of the student responses on the Piers-Harris 2, middle school transition questionnaire, and interviews over the course of the transitional year from the elementary multiage classroom to the single grade classroom at the middle school. The focus of the analysis was to determine the nature of the transitional experience of these students.

In the analysis of the Piers-Harris 2 students overall scores (TOT score) increased over the course of the transitional year, meaning that the students’ overall sense of self and self-esteem improved over the course of the transitional year. While there were no significant increases in students’ behavioral adjustment (BEH), intellectual and school status (INT), or popularity (POP), students showed increases in other areas. Students’ sense of physical attractiveness and leadership abilities (PHY) and sense of happiness (HAP) increased over the course of the transitional year. Also, students’ sense of anxiety (FRE) lessened over the course of the transitional year.

In order to determine the specific concerns of the students during the transition, a questionnaire was given to students at three points during the transitional year: fall, winter, and spring. A repeated measures ANOVA was used to analyze students’ academic concerns over the course of the transitional year. There was a significant decrease of concern with academics from the fall to the spring. A repeated measures ANOVA was also used to analyze students’ procedures/rules concerns over the course of the transitional year. There was a significant decrease of concern with procedures/rules from the fall to the spring. Lastly, a repeated measures ANOVA was also used to analyze
students’ social life concerns over the course of the transitional year. There was a significant decrease of concern with social life from the fall to the spring.

To keep the interview data in alignment with the student transition questionnaire data, student responses were initially coded into the following categories: 1) academic, 2) procedural, and 3) social. From there, sub-categories and themes were identified. The following major categories emerged: (a) adjusting to the structure of middle school, (b) adjusting to new academic demands, (c) managing relationships with teachers and peers, and (d) changing sense of self.
CHAPTER V
CONCLUSIONS, DISCUSSION, AND RESEARCH IMPLICATIONS

The times are such that educational reform and the best way to close the achievement gap weigh heavily on the minds of educators. Multiage programming represents one such reform that exists in all 50 states, and even has been mandated in several states in the hopes that offering a child-centered approach to learning will better meet the academic as well as social-emotional needs of students. Many studies have focused on the impact that multiage classrooms have on student achievement. Indeed, it has been shown that children in multiage classrooms fare as well as or better than their peers in single-grade classrooms on standard measures of achievement (Anderson & Pavan, 1993; Gutierrez & Slavin, 1992; Luvisi & Miller, 2001; Miller, 1990; Nye, 1995; Pavan, 1992). The second area that the research has focused upon is the effect that multiage classrooms have on the social-emotional development of children. Students in multiage classrooms are better behaved (Elder, Clawson, & Howard, 1996), develop lasting friendships, (McClellan & Kinsey, 1999), and demonstrate more positive prosocial behaviors than their peers in single-grade classrooms (McClellan & Kinsey, 1999). Thus, multiage programming represents the exact type of systems reform that addresses both social and emotional learning as well as leads to increases in academic achievement. The question of how such a reform system can impact the existing
educational systems in place and the students who participate in them has yet to be fully addressed.

As discussed in Chapter II, it is well documented that the transition to middle school from elementary school has a negative impact on students (Anderman & Midgley, 1996; Elias et al., 1992; Harter, 1981; Hirsch & Rapkin, 1987), but there has been little research that examines the experience of students as they transition from multiage classrooms at the elementary level to single-grade classrooms at the middle school. The research on the multiage transition shows that students experience a shift from integrated curriculum to compartmentalized curriculum, a shift from a feeling of community to a sense of isolation, and a shift from a more democratic classroom environment to a more autocratic environment (Camilli, 1999; Wick, 1989).

It is important to note that the previously mentioned research that has been conducted on the transitional experience from multiage classrooms at the elementary level to single-grade classrooms at the middle school has been hampered by the fact that some of the research was not conducted during the actual transitional year, but rather years after the transition has been made. Further, some of students selected for the studies had only been in the multiage program for a short period of time prior to the transition, less than two years, and in some cases only one year, such that it cannot be clearly determined if the time spent in the multiage classroom was a factor in their transitional experience. In addition, the research that has been conducted on the transition experience of multiage students has been strictly qualitative in nature.
This chapter summarizes and discusses the findings of the study, as well as the implications that such research has for educators. Recommendations on how to support multiage students as they transition from multiage elementary classrooms to single-grade classrooms at the middle school are discussed. Lastly, in this chapter recommendations for further research are discussed.

**Summary of Study**

The purpose of this simultaneous, mixed methods study was to provide an in-depth examination of the transition effects on students who transition from multiage elementary classrooms to traditional single-grade classrooms at the middle school. Through a series of questionnaires, standardized measurement instruments, and interviews, the researcher sought to determine the perceptions of students on the transition process and its impact for students moving from a fifth/sixth grade multiage classroom to a seventh grade single grade classroom. This study aimed to answer the overarching question of: What is the experience of students from multiage elementary classrooms when they transition to single-grade classrooms at the middle school? To answer this question, the researcher addressed the following sub questions:

1. What are the changes in the nature of student self-concept and self-esteem as measured by Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2) for multiage elementary students during the transition to middle school?

2. How do students from multiage elementary classrooms manage the transition?
3. How do students from multiage elementary classrooms manage the academic differences of middle school?

During the fall of the seventh grade year, the beginning of the transition, October and November 2009, students took the Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris 2). At this same time, the students also took the middle school transition questionnaire. These same instruments were administered to students in February and May 2010. Student interviews, which were conducted during the same time period that the quantitative instruments were administered, provided a qualitative data source. The data gathered during the interviews were used to explore the opinions and experiences of the students that would not necessarily be elicited from the questionnaires.

Conclusions

Research Subquestion #1

What is the nature of student self-concept and self-esteem as measured by Piers-Harris Children’s Self-Concept Scale Second Edition (Piers-Harris 2) for multiage elementary students during the transition to middle school?

Students were administered the Piers- Harris Children’s Self-Concept Scale Second Edition (Piers-Harris 2) at multiple points during the transition year as a means of gathering data about students’ self-concept and self-esteem. A repeated measures ANOVA was used to analyze students’ overall scores as well as the scores for each of the six subscales of the assessment. Students overall score (TOT score) means for all three testing sessions fell into the average TOT score range for the Piers Harris 2, which would
suggest that throughout the students’ self-concept and self-esteem, namely how they felt above themselves and school, was not in accord with the research that has been collected on the middle school transition as it has been previously shown that “students’ perceptions of the quality of school life decline as they progress from elementary to secondary school with the largest decline occurring during the transition to a middle level school” (Schumacher, 1998 p. 2). Motivation and attitudes towards school tends to decline during the transition (Anderman & Midgley, 1996; Harter, 1981) and this decline occurs regardless of academic ability (Elias et al., 1992; Hirsch & Rapkin, 1987). Poorer academic performance also occurs during this transitional period (Anderman & Midgley, 1996; Felner, Ginter, & Primavera, 1982, cited by Diemert, 1992). Indeed, for the students in this study who came from multiage classrooms, not only were their overall self-concept and self-esteem scores well within the average range, but students overall scores (TOT score) increased over the course of the transitional year, meaning that the students’ overall sense of self and self-esteem improved over the course of the transitional year.

An analysis of the domains of the Piers-Harris 2 yielded no significant increases or decreases in students’ behavioral adjustment (BEH), intellectual and school status (INT), or popularity (POP), but students showed increases in other areas. Students’ sense of physical attractiveness and leadership abilities (PHY) and sense of happiness (HAP) increased over the course of the transitional year. Also, students’ sense of anxiety (FRE) lessened over the course of the transitional year.
The results of the analysis of the Piers-Harris 2 would indicate that the transition to middle school for students who previously attended multiage classrooms can be characterized as positive in that student scores are well-within the average range and actually increase or improve over the course of the transition. This would further indicate that the transition to middle school for students who previously attended multiage classrooms differs from students who attended traditional elementary schools.

**Research Subquestion #2**

*How do students from multiage elementary classrooms manage the transition?*

The results of the questionnaire showed that students had few procedural concerns throughout their transitions experience over the course of the year. Students’ levels of concern with procedures decreased over the course of the transitional year, with significant decreases occurring from fall to winter and fall to spring as they became more familiar with their daily routines.

The student interviews reflected these results as well. While procedural concerns were expressed by students in the fall and winter, there were no procedural concerns expressed by spring of the transitional year. Students felt the pace of the day was faster and more difficult to manage in middle school than in elementary school and this was due to the fact that they had to regularly change class periods throughout the course of the school day and navigate a much larger school building. As elementary students they were able to stay in one classroom and keep their materials in a backpack. With the introduction of lockers, students had to manage their time as well as their materials.
Students were able to readily adapt to these changes and had learned routes to their classes and when to go to their lockers which helped to dispel this transitional concern.

**Managing social changes.** With regard to the social aspects of the transition students expressed decreasing concern with social life on the middle school transition questionnaire, with significant decreases occurring from fall to winter and fall to spring as they became more familiar with their teachers and made new friends. While on the questionnaire these concerns decreased over the course of the transitional year, by the spring interviews it became apparent that social relationships with teachers and peers become more of a concern to students as the year progressed. While interview responses in the fall and winter largely focused on academic and procedural issues, the spring interviews were focused on social issues and the relationships that they had developed with their teachers and peers.

When students were asked to describe the differences that they noticed between their elementary teachers and their middle school teachers, students felt that their elementary school teachers were less knowledgeable than their middle school teachers. At the same time, students felt that it was more difficult to connect with their middle school teachers than with their elementary teachers. While most students were able to develop positive relationships with their middle school teachers, as has been seen in the previous research conducted by Wick (1989), students found themselves longing for aspects of the community and relationships that they had experienced in the multiage classroom. The students reported maintaining relationships with their classmates who were still at the elementary school as well as their former elementary school teachers.
Indeed, for some students, maintaining this connection with the multiage classroom was a means of coping with the changes experienced during the transition to middle school.

When asked about how the positives and negatives about the transition to the middle school, students frequently cited the importance that making new friends had on whether or not their experiences were positive. Students who indicated that they had a positive transition experience, said that is was due to the fact that they had made new friends in middle school. Thus, a student’s ability to expand socially was essential to having a positive transitional experience.

**Research Subquestion #3**

*How do students from multiage elementary classrooms manage the academic differences of middle school?*

In order to determine the specific concerns of the students during the transition, a questionnaire was given to students at three points during the transitional year: fall, winter, and spring. Of the five academic statements listed on the questionnaire, students indicated a significant concern about getting good grades during the fall. A repeated measures ANOVA was used to analyze students concern with academics over the course of the transitional year. There was a significant decrease of concern with academics from the fall to the spring. The results of the questionnaire would suggest that students were relatively unconcerned or had little worry with regard to academics over the course of the transitional year, and what initial concerns they did have, abated over the course of the course of the year. Students adjusted to the grading system of middle school with little difficulty which supports the work of previously conducted research (Wick, 1989).
According to the research of Diemert (1992) conducted on the middle school transition, students have greater social concerns and needs than academic and procedural needs. These results of the questionnaire seem to be in accordance with this research as well as with the student interview responses gathered during the research process about academics. When analyzing the data gathered from the fall interviews, it became apparent that the students were primarily concerned with topics relating to academics and procedures. These concerns lessened over the course of the year and developed into a focus on the social aspect of the transitional year, with a specific focus on changing relationships with teachers and peers.

During the interviews, students noted the change in instruction from elementary school to middle school with the reliance in middle school on textbooks. This perception of the middle-school single-grade classrooms as more textbook driven is in accordance with student responses in other research studies (Camilli, 1999). While students noted this difference, using textbooks did not seem to concern them, and they readily adapted to the change in instructional methodology.

In addition to the introduction of textbooks, students had to adjust to the increase in homework, feeling that the homework load in middle school had not only increased in the amount of homework that they received, but also in the level of difficulty and time required to complete it. Students found this change in homework to be stressful and some students even described it as “overwhelming.” There was a feeling among the students that their elementary teachers were not as strict about homework completion and perhaps had lower expectations for the completion of the work. This change in teacher
expectations on the part of the middle school teachers also caused distress for some students. So not only did they feel that there was more homework to complete, but the teachers expectations for quality of work and work completion were more rigorous at the middle school level. It is likely that adjusting to these changes in homework contributed to students concern with getting good grades during the initial phases of the transitional year.

According to the study, students overall had relatively low concerns with academic during the transitional year and managed the academic differences with little incident. Students did demonstrate higher concerns in the fall with getting good grades which can possibly be linked to the concerns that they had in the fall with the increase in homework and the change in teacher expectations for homework.

Limitations

The results of this study are not without limitations. One limitation of the research was the small sample size. The number of participants relative to the number of students solicited for the study was low; only 8 students of a possible 60 participated in the study. Originally, the researcher had hoped to be able to obtain student names and contact information from the school so as to invite participants directly. The researcher was denied this access and instead had to rely upon the teachers to make an announcement during for students to take the participation forms if they wanted them. It is possible that the forms never were taken by the students.

There are a number of reasons why the students who may have received the materials may have elected not to participate in the research study. The students needed
to have obtained parent/guardian signatures in order to participate in the study. Given the age of the students targeted for the study, 12 to 13 years old, it is likely that students this age did not effectively handle the responsibility of bringing the consent forms home to be considered by parents/guardians and signed in a timely manner.

Another reason that students may have declined to participate in the study was due to the time commitment involved with the study. Students were asked to commit to participating throughout the course of their 7th grade year, with the need to meet with the researcher during multiple sessions. Some students may not have wanted to commit to such a lengthy process. Moreover, participation in the research study required students to meet with the researcher during their lunch period. This effectively meant that students would be giving up their “free” time to meet with the researcher six times. For most adolescents the opportunity to socialize with friends and rest from classes is not something readily sacrificed. Of course it is also possible that some parents/guardians were simply not interested in the study. Given the length and style of language used to write the consent forms, it is also possible that parents/guardians found the forms to be intimidating or confusing. As the researcher required that participants previously attended the selected for multiage school for at least three years, it is also possible that students were simply not eligible for the study based on this requirement.

Another limitation of the study was the uniqueness of the group of students. As elementary students they participated in fifth/sixth grade multiage classroom prior to transitioning to the middle school in seventh grade. For many students the transition to middle school occurs in sixth grade. While the transition experience to middle school
regardless of the age of the student can certainly share commonalities, early adolescence is a time of many physical and emotional changes of which are directly linked to a students’ age or developmental stage in life which can impact the reactions to the stressors of the transitional period. Thus, the results must be taken within the context of this particular grade-arrangement and school setting.

**Research Implications**

There are several major implications that should be considered based on the findings of this mixed method study of the transitional experience of students from multiage elementary classrooms to single grade classrooms at the middle school. There are implications for middle level educators, multiage classroom elementary educators, and parents of children in multiage elementary classrooms.

**Implications for Middle Level Educators**

Meeting the social needs of students during this transition period is a key consideration for middle level educators as most programs that aid with the transition focus on academics and rules and regulations (Schumacher, 1998); the research of Diemert (1992) and the results of this mixed method study show that students have greater social concerns and needs than academic and procedural needs. The students at this middle school participated in some transitioning programming that was directed at academics and procedures but not on the social concerns. The students did not believe that the programming that was offered by the school fully addressed their concerns with academics and procedures.
This research implies that programming that specifically addresses the social needs of students in the areas of helping them to make my friends and develop positive relationships with the multiple teachers that they see throughout the course of the day is warranted. In addition, it was important for the students during the transitional year to maintain their positive relationships with their former elementary teachers and their multiage classmates who have yet to transition. Middle school educators would do well to seek opportunities to support these relationships that the students deem so important to maintain.

That is not to say that programming that addresses procedures and academics needs to be abandoned. On the contrary, the programming the schools offer in the area is needed as indicated by the research, but ultimately the programming needs to better implemented or designed to meet the needs of students in this area. Students suggested that they be allowed time in the summer to acclimate themselves to the new environment without the added pressure of complying with the demands of a school day or at least the opportunity to have a “practice” day to learn their routes to classes and lockers.

**Implications for Multiage Classroom Elementary Educators**

One of the challenges for multiage programs is getting parents to commit to a program that is different from the traditional model out of fear for causing harm to their children or somehow creating a future hardship when their child is asked to transition back to the traditional model. This research suggests that parents need not fear the transition from multiage elementary programs to single-grade classrooms. Thus, as a potential reform model, multiage classrooms at the elementary level are viable option for
meeting the academic and social-emotional needs of students without fear that students will experience difficulty adjusting to the traditional model upon entering middle school.

Maintaining connections with their previous multiage classmates and multiage classroom teachers was important to students as they made the transition. It suggests that elementary schools need to find ways to assist students in maintaining these relationships, which requires the school to work in partnership with the middle school.

**Implications for Parents**

Typically, multiage programs are programs of choice where parents, knowing the positive impact of such programming can have on their children, choose to enroll their children in multiage classrooms. Knowing about the transition effects at the end of their students’ multiage education career would help parents make fully informed educational decisions for their children. This study has shown that the experience of students who transition to middle school from multiage elementary classrooms is positive. Therefore, parent concern about their student not adjusting well to the changes that will occur during the transitional should not be a factor to be concerned about when parents are deciding whether or not to enroll their children in multiage elementary programs.

**Future Research**

As was mentioned in the limitations section, this study utilized a very small sample size which impacted the generalizability of the study. Future research with a larger sample size is warranted. Moreover, this study was conducted in a well-established suburban school district with a reputation for academic excellence. Future
studies in other locations such as rural and urban schools would enhance the understanding of the transitional experience of these students.

This research location represents a unique opportunity for learning about transitional experience of students from multiage classrooms as there are three different schools with multiage classrooms that feed into this middle school along with students who attended the same schools but were enrolled in traditional elementary classrooms. Further study at this school could examine whether the transitional experience of students from multiage classrooms is related to the school they previously attended or whether the transitional experience for students from multiage classrooms is more universal in nature. Moreover, data can be gathered from students who transitioned to the middle school from traditional elementary classrooms as a means of comparing their experiences to that of the students from multiage classrooms to determine any differences between the two groups during the transitional year.

This study looked at the transition from the student’s point of view, but that is only one perspective that can contribute to the understanding of the transitional experience of these students. The work of Wick (1989) and Camilli (1999) on the transition from multiage classrooms to single-grade classrooms included gathering data from other stakeholder groups, namely parents and the single-grade classroom teachers. Thus, in order to have a comprehensive understanding of the transition from multiage classrooms to single-grade classrooms, future research should include the collection of data from both parents and teachers.
As has been mentioned previously, much of the research that has been gathered on the transition from multiage classrooms to single-grade classrooms has been qualitative in nature. This study utilized a mixed method approach in order to gather quantitative data in the form of questionnaires to enhance the understanding of the qualitative data that was gathered. Future research should look to replicating the use of the quantitative instruments used in this study as well as gathering other forms of quantitative data.

In regard to developing an understanding of students’ academic performance during the transition, this study relied upon students to self-report this information. Future quantitative data collection should include data that is reported by the school or teachers on student academic performance in the form of grades and/or student performance on standardized assessments.

Lastly, while not directly addressed in this study, the Montessori model employs a multiage classroom format. As with multiage classroom programming, Montessori schools typically only service students in grade Pre-K through 5 and students must then transition to single-grade classrooms. Again, as Montessori is a choice schooling option, parents wrestle the same concerns of the difficulty of transitioning between programs and are faced with the same decision as parents of students in multiage programs about when to transition their children. Research on the transitional experience of Montessori students perhaps could provide insight to the broader understanding of the transitional experience of students leaving multiage classrooms for single-grade classrooms.
APPENDIX A

MIDDLE SCHOOL TRANSITION QUESTIONNAIRES
7th Grade Transition Questionnaire

It is the beginning of your 7th grade year. Please rate your level of concern or worry with each of the following items. Circle a number for each statement.

<table>
<thead>
<tr>
<th>Academics</th>
<th>Not Concerned or Worried</th>
<th>A Little Concerned or Worried</th>
<th>No Opinion</th>
<th>Concerned or Worried</th>
<th>Very Concerned or Worried</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having a new grading system</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Having more teachers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Knowing the amount of homework</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Knowing how to get extra help from teachers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Getting good grades</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedures/Rules</th>
<th>Not Concerned or Worried</th>
<th>A Little Concerned or Worried</th>
<th>No Opinion</th>
<th>Concerned or Worried</th>
<th>Very Concerned or Worried</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Knowing the school rules</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>7. Changing/Finding classes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>8. Knowing how to behave in different teachers' classrooms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Knowing when I can go to my locker</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Keeping track of my materials</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Being late to class</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Life</th>
<th>Not Concerned or Worried</th>
<th>A Little Concerned or Worried</th>
<th>No Opinion</th>
<th>Concerned or Worried</th>
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</tr>
</thead>
<tbody>
<tr>
<td>12. Being around older students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. Being bullied or teased</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Being in classes with students from other elementary schools</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>15. Knowing who I will sit with at lunch</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>16. Being in classes with my friends</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. Making new friends</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. Having a teacher I can talk to when I have problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tr>
</tbody>
</table>
7th Grade Transition Questionnaire

It is the middle of your 7th grade year. Please rate your level of concern or worry with each of the following items. Circle a number for each statement.

<table>
<thead>
<tr>
<th>Academics</th>
<th>Not Concerned or Worry</th>
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7th Grade Transition Questionnaire

It is the end of your 7th grade year. Please rate your level of concern or worry with each of the following items. Circle a number for each statement.

### Academics

1. Having a new grading system
2. Having more teachers
3. Knowing the amount of homework
4. Knowing how to get extra help from teachers
5. Getting good grades

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### Procedures/Rules

6. Knowing the school rules
7. Changing/Finding classes
8. Knowing how to behave in different teachers’ classrooms
9. Knowing when I can go to the locker
10. Keeping track of my materials
11. Being late to class

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### Social Life

12. Being around older students
13. Being bullied or teased
14. Being in classes with students from other elementary schools
15. Knowing who I will sit with at lunch
16. Being in classes with my friends
17. Making new friends
18. Having a teacher I can talk to when I have problems

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APPENDIX B

IRB DOCUMENTS
Minor Assent Form

Dear Student,

My name is Cindy Ruesch. You are being invited to participate in my research project. I am doing this project as part of my doctoral degree program at Loyola University. Through this project, I want to learn about students who have been in elementary multiage classrooms and their experiences during the 7th grade transition to middle school.

If you want to be a part of this research project, you will be asked to take a questionnaire about how you feel about yourself and a questionnaire about how you feel about school. You will take these same questionnaires three times over the course of the next year. You will take these questionnaires in a group during your lunch period. Each questionnaire should take about 5-10 minutes to complete. After the questionnaires have been completed, I will randomly select some of you to talk with me about how you feel about being a 7th grader. I will tape-record our talk and the sessions should last about 15-20 minutes. The total time you will spend on this project over the course of the next school year is about two-three hours.

Participation in this research project is completely voluntary. You will not be paid to work with me on this project, and your grades in school will not be affected by being in this research project or by not being in this research project. There are no known risks involved in participating in this research. There are no direct benefits to you, but the results from the research will help teachers to better meet the needs of students from multiage programs.

If at any time you do not want to answer any more questions or quit being a part of this project, you are free to stop. You can also choose not to answer questions that you don’t want to answer. Your name will not be used in any reports that I write about this project. No one will know what you tell me during this project, including your parents and teachers. Everything will be confidential. There are exceptions to the promise of confidentiality. Any information you reveal concerning suicide or child abuse and neglect is required by law to be reported to the proper authorities.
If you have questions about this research project, please feel free to contact Cindy Ruesch at cruesch@aol.com or (847)566-9221 or the faculty sponsor, Dr. Brigid Schultz at (312)915-7492. If you have questions about your rights as a research participant, you may contact the Compliance Manager in Loyola’s Office of Research Services at (773) 508-2689.

Signing this paper means that you have read this form or had it read to you and that you want to be in the study. If you don’t want to be in the study, don’t sign the paper. Remember, being in the study is up to you. No one will be mad if you don’t sign this paper or even if you change your mind later.

Please check the appropriate space below:

_____ I agree to complete the research questionnaires.
_____ I do NOT agree to complete the research questionnaires.

_____ I agree to participate in the research interviews.
_____ I do NOT agree to participate in the research interviews.

Name of Participant (printed): __________________________________________

Signature of Participant: ____________________________________________

Date: __________________________________________________________________

Principal Researcher’s Name (printed): _________________________________

Principal Researcher’s Signature: _______________________________________

Date: __________________________________________________________________
CONSENT TO PARTICIPATE IN RESEARCH

Project Title: Examining the Transition Experience of Students from Multisite Elementary Programs to the Middle School

Researcher: Cindy Ruesch
Faculty Sponsor: Dr. Bridgit Schulz

Dear Parent,

You are being asked to give permission for your child to take part in a research study being conducted by Cindy Ruesch for a dissertation under the supervision of Dr. Bridgit Schulz in the Department of Education at Loyola University of Chicago.

As a parent whose child has attended a multisite school, I am sure that you have been made aware of the many benefits of multisite programs and the research that supports the model. My research seeks to learn what happens to these students when they leave multisite programs and enter middle school. Your child is being asked to participate because your child has participated in a multisite classroom at Everett Dukson Elementary School and will be attending middle school during the 09-10 school year. Only those students who have been in a multisite classroom setting for at least three years will be eligible to participate in the study. Please read this form carefully and ask any questions you may have before deciding whether to allow your child to participate in the study.

Purpose:
The purpose of this study is to learn about students who have been in elementary multisite classrooms and their experiences during the transition to middle school.

Procedures:
If you agree to allow your child to be in the study, he/she will be asked to work with the researcher during lunch and asked to:

- Complete a questionnaire about the transition to middle school. He/she will be asked questions about school related concerns or worries. He/she will take this questionnaire in the fall, winter, and spring of his/her 7th grade year. The questionnaire will take approximately 5-10 minutes to complete.
- Complete the Piers-Harris Children’s Self-Concept Scale Second Edition (Piers Harris) questionnaire. He/she will be asked questions about how he/she feels about himself/herself and his/her abilities in school. He/she will take this questionnaire in the fall, winter, and spring of his/her 7th grade year. The questionnaire will take approximately 5-10 minutes to complete.
- Participate in 3 interviews throughout the school year. He/she will be asked questions about his/her experiences transitioning from a 6th grade multisite classroom to a 7th grade single grade classroom. He/she will be asked questions about the differences between 6th grade and 7th grade and how he/she feels about the differences. Interviews will take approximately 15-20 minutes to complete. Interviews will be audio-taped. Only a select number of students will be asked to participate in interviews. Students will be randomly selected to participate in the interviews.

Risks/Benefits:
There are no foreseeable risks involved in participating in this research beyond those experienced in everyday life. There are no direct benefits to your child from participation, but the results from the research will help educators to better meet the needs of students from multisite programs.
Confidentiality:
- Information that your child shares with the researcher will be kept confidential and will not be shared with anyone at your child’s school.
- Your child’s name will not appear on any questionnaires that he/she fills out. The questionnaires will be labeled with a number so only the researcher will know which questionnaire was completed by your child. Only the researcher will have access to the key that links the number on your child’s questionnaires to your child’s name.
- If your child participates in interviews, the interviews will be recorded. A transcriber will transcribe the recording. The audio-recording will be destroyed at the end of the research. Your child’s name would be replaced with a pseudonym in the transcriptions to protect your child’s identity.
- All information that your child shares with the researcher will be kept confidential, unless your child indicates that he/she or another child are a victim of abuse or neglect. Any reports of abuse or neglect will be reported to the school to follow up on.

Voluntary Participation:
Participation in this study is voluntary. If you do not want your child to be in this study, he/she does not have to participate. You and your child’s decision whether or not to participate in this research will have no affect on your child’s grades and/or relationship with the school. Even if you decide to allow your child to participate, he/she is free not to answer any question or to withdraw from participation at any time without penalty.

Contacts and Questions:
If you have questions about this research project, please feel free to contact Cindy Reasch at cmenock@ol.com or (847)566-9221 or the faculty sponsor, Dr. Brand Schulitz at (312)915-7402. Copies of the questionnaire and interview questions have been given to the building principal and are available to you at any time. If you have questions about your child’s rights as a research participant, you may contact the Compliance Manager in Loyola’s Office of Research Services at (773) 508-2689.

Statement of Consent:
Your signature below indicates that you have read and understood the information provided above, have had an opportunity to ask questions, and agree to allow your child to participate in this research study. You will be given a copy of this form to keep for your records.

Please check the appropriate space below:

_____ I agree to allow my child to complete the research questionnaires.

_____ I do NOT agree to allow my child to complete the research questionnaires.

_____ I agree to allow my child to participate in the research interviews.

_____ I do NOT agree to allow my child to participate in the research interviews.

Parent(s)/Guardian’s Signature ____________ Date ____________

Researcher’s Signature ____________ Date ____________

Please return a signed copy of the form to your child’s homeroom teacher in the enclosed envelope within 7 days.
REFERENCES


VITA

Cindy L. Ruesch is the daughter of Ken and Tai Ruesch. She was born in Ft. Benning, Georgia on September 2, 1974. She currently resides in St. Charles, Illinois.

Cindy graduated from Grayslake Community High School in 1992. She earned the Bachelor of Arts degree in 1996 from North Central College in Naperville, Illinois with a major in English and a minor in psychology. In 1998 she earned the Master of Arts degree in women’s studies from Roosevelt University in Chicago, Illinois. In 2002 she earned the Master of School Administration from North Carolina State University in Raleigh, North Carolina.

Cindy began her career in teaching in 1998 being accepted to Teach for America. She taught seventh grade language arts and social studies for three years in Franklin County, North Carolina. There she earned the title of Teacher of the Year for Bunn Middle School in 2001. In 2001 she began teaching the Humanities program, a sixth, seventh and eighth grade multiage language arts course for gifted students at Carl Sandburg Middle School in Mundelein, Illinois for six years. She also taught social studies, law, journalism, and eighth grade language arts during her tenure there.

In 2007 she began her career as Curriculum Director for Diamond Lake School District before moving to her current position as Assistant Director or Curriculum/ELL Program Director for St. Charles CUSD 303.
She has had the great fortune to have learned about the Japanese school system by participating in the Fulbright Memorial Fund program as well as about the New Zealand bilingual education programming through the Fulbright-Hays Seminars Abroad program.

Cindy is a member of the National Association for Gifted Children (NAGC), International Reading Association (IRA), and the Illinois Association for Supervision and Curriculum Development (Illinois ASCD).
DISSERTATION COMMITTEE

The Dissertation submitted by Cindy L. Ruesch has been read and approved by the following committee:

Brigid Schultz, Ed.D., Director
Clinical Assistant Professor, School of Education
Loyola University Chicago

David Ensminger, Ph.D.
Assistant Professor, School of Education
Loyola University Chicago

Beverly Kasper, Ed.D.
Associate Dean, School of Education
Loyola University Chicago