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The Effects of Academic Redshirting Among Third-Grade Students in a Rural Southeastern School District

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The Effects of Academic Redshirting Among Third-Grade Students in a Rural
Southeastern School District

By
Christin Smith

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
2016

Approval Page

This dissertation was submitted by Christin Smith under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

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Abstract

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The purpose of this quantitative study was to determine if there was a significant difference in scores on the third-grade South Carolina Palmetto Assessment of State Standards (PASS) in reading and math between students who were academically redshirted and students who were not academically redshirted. This study also investigated whether gender has an impact on academic success between students within these two groups.

This research took place in a small, rural school district in the upstate region of South Carolina. There are approximately 2,900 students in the district. The participants in this study included students who participated in the South Carolina PASS test during their third-grade year. Within this group, the researcher looked at those students who were academically redshirted in kindergarten and compared them to those who were not redshirted in kindergarten. The researcher observed data from multiple years by looking at the third-grade scores from each year PASS has been given, 2009-2014. Eight hundred eighty-two students were included in the study. Of the 882 students, 41 were academically redshirted, while the remaining 841 students were not. There were a total of 436 males and 446 females. Of the 41 who were redshirted, 27 were male and 14 were female.

The methodology used in this research study included an independent-samples *t* test to determine whether the difference between the reading and math scores on the third-grade PASS between redshirted students and non-redshirted students was statistically significant. Also, a two-way ANOVA was conducted to determine if a statistically significant difference existed between the PASS scores of the redshirted and non-redshirted males and the redshirted and non-redshirted females.

When reviewing the results of the study, the research indicated that nonacademically redshirted students score significantly higher in reading and math than the academically redshirted students; however, when gender was factored in, there was not a statistically significant difference. Additionally, school entry status (academically redshirted students vs. nonacademically redshirted students) and birth month have a significant effect on reading scores; however, school entry status and birth month do not have a significant effect on math scores.

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Chapter 1: Introduction

Statement of the Problem

What happens when a student is *old enough* to begin school but not *ready* for school? Children need to be ready to succeed when they begin school. Not only do they need to be ready cognitively, but they must also be ready physically, socially, and emotionally. Guddemi and Marchesseault (2009) stated, “A child’s readiness for a particular school program is indicated by his or her physical, social, emotional, and academic readiness, leading to his or her ability to cope and sustain in that environment without undue stress or awkwardness” (p. 77).

Some states try to ensure readiness by changing the cut-off date for entrance. While this can help, some parents, teachers, and administrators feel that changing the cut-off date alone is not enough. They believe that some students need an extra year to mature before they can be ready to succeed. Some students are given an extra year through retention, while others are given an extra year through a practice known as academic redshirting (Frey, 2005). The term academic redshirting refers to a student who is held back a year in order to be ready physically, socially, and/or academically (Guddemi & Marchesseault, 2009).

Kindergarten readiness has been a topic of concern in the United States especially since the development of the No Child Left Behind Act of 2001 (NCLB). All students are expected to meet a certain set of standards. Standards have increased, and students are expected to do more and more each year. Education policymakers have called for increasingly rigorous kindergarten curricula (March, 2005). Kindergarten programs today center on more specific academic goals and objectives and imitate what was once a first-grade focus (March, 2005). Parents, teachers, and school administrators are

concerned that younger students will struggle to meet these increased academic demands (Barron, 2007). According to Barron (2007), the difficulty lies in determining what constitutes school readiness. How do parents, teachers, and administrators know when a child is ready for kindergarten? These changes have caused parents and educators to take other precautionary measures. Many parents, teachers, and administrators are considering holding students back and delaying their kindergarten entry by 1 year (Frey, 2005; Marshall, 2003; Vecchiotti, 2001).

Often, there are conflicting ideas between parents and educators about school readiness. A majority of parents believe that academic and behavioral skills are most important in order to be successful in kindergarten. While teachers agree with this, they add that other skills are also important: the abilities to sit still, share, and hold a pencil (Diamond, Reagan, & Bandyk, 2000).

According to DeMeis and Stearns (1992), there has been controversy regarding the appropriate age to start kindergarten. The literature regarding the optimal age of kindergarten entrance is ambiguous (DeMeis & Stearns, 1992). Some researchers suggest that students who enter kindergarten at a younger age may be at a disadvantage (Ede, 2004; Grimes, n.d.; Zill, Loomis, & West, 1997), while other research shows that there is no significant academic difference between younger students and their older peers (Ede, 2004; Shepard & Smith, 1986). Parents, teachers, and administrators are often torn and are unable to make that difficult decision: Should a child begin school when he or she is age appropriate and risk over-placement, which refers to a child being placed in an academic setting that is over the child's developmental readiness and in which the child's individual needs are not able to be met (Guddemi & Marchesseault, 2009); or should they delay entrance into kindergarten and start the child a year later?

Parents and teachers often experience confusion while making this determination. This is a decision that parents face every year. There is a need to identify the significance of kindergarten entry age and gender on the achievement of third-grade students. Parents and administrators who are making these important decisions are often not well informed on the advantages and disadvantages of academic redshirting. Delaying school entry for a student will most certainly have an effect on a child's life (positively or negatively), but learning more about the topic and exploring the research is crucial in helping parents and educators make an informed decision (Ede, 2004).

Purpose of the Study

The purpose of this study was to determine if there was a possible difference in scores on the Palmetto Assessment of State Standards (PASS) in reading and math between third-grade students who were academically redshirted and students who were not academically redshirted. Gender was also factored into the comparison in order to allow the researcher to determine if gender shared a relationship with these scores on the third-grade PASS. Examining the potential effects of gender on birthdate may result in a deeper analysis of the research topic. It is often difficult for parents and educators to make decisions regarding the best age for a child to enter kindergarten. Sometimes, parents decide to voluntarily delay entry for their child even if the child meets the state cut-off entry age, believing that delayed entry will lead to more success in school. This study looked at the data of the students who were redshirted and compared that data with the data of the students who were not redshirted in order to determine if a relationship existed.

Significance of the Study

Parents, teachers, and administrators often search for assistance when evaluating

whether a student is ready to begin kindergarten. Although state guidelines provide a cut-off date, this date varies widely among states. The decision to begin kindergarten or wait another year is often left up to the parents. Furthermore, there are other factors that should be considered, besides age, before enrolling a student in school such as gender, maturity, behavioral skills, preschool/home environment, and socioeconomic status. This study is significant because it may provide useful information for parents, teachers, and administrators to help guide them in making decisions regarding a child's entrance into kindergarten. The results of this study may also provide guidance for stakeholders involved with curriculum and assessment decisions as they prepare materials, programs, and resources for early elementary students. In addition, this research may determine whether a child's age of entry in kindergarten directly impacts chances for success and whether some children can catch up to their older classmates by the third grade and learn on the same level. Finally, the results of this study may provide state legislators with valuable information to assist them in ensuring that their states have appropriate cut-off dates for students entering kindergarten.

Theoretical Framework

For many years, scholars have suggested theories about how they believe children develop, grow, and learn. Since every human is expected to develop, grow, and learn, trying to comprehend how this process takes place is a very meaningful pursuit. Theories involving when, how, and under what conditions learning takes place are crucial in helping to determine a child's optimal entry time into school. Unfortunately, there is not a definitive theory on which all educators agree that explains the process of growth and development; however, there are various, respected theories of child development and learning. Many of these theories overlap with each other, while some are in direct

conflict with each other. In order to thoroughly examine the topic of school entry, it is necessary to consider the theories that are most relevant. For this discussion, Jean Piaget's theory of cognitive development and Arnold Gesell's theory of maturation were examined. Their theories can be grouped together as relating to developmental readiness.

Piaget. Jean Piaget is one of the most well-known theorists on the topic of early childhood development. He began studying child development after watching his own children interact with their surroundings as they were growing up (Walker, 2004). His theory of cognitive development emphasizes psychobiological together with environmental factors to explain how children gather knowledge (Ogletree, 1997). His child development theory of cognitive development is centered on stages of development. Piaget believed that every child's interaction establishes cognitive structure within the child (Lipoff, 2011). He identified four stages of a child's mental growth. The first stage, occurring from birth to age two, he referred to as the sensorimotor stage. In this stage, the child is concerned with gaining motor control and learning about physical objects. A child tries to organize information he or she receives about the world through physical interactions with it. By seeing, touching, and hearing, babies learn about their surroundings (Walker, 2004). In addition, a child in this stage is not yet aware of object permanence. This means that he or she has not figured out that when something is out of sight, it is still in existence (Lipoff, 2011).

He referred to the second stage as the preoperational stage. In this stage, from ages two to seven, the child is preoccupied with verbal skills. At this point, the child can name objects and reason intuitively. He or she begins to think and analyze his or her surroundings, but thinking is lacking due to his or her inability to comprehend principles of conservation (Walker, 2004). Children in this stage can start making decisions based

on their perceptions, but they are unable to fully comprehend certain features of the physical world. During this stage, they become capable of understanding symbolic meaning and they think in an egocentric manner; they are unable to see things from others' perspectives (Walker, 2004). Using bribes to achieve desired behaviors is not recommended in this stage. It can have negative consequences later in a child's development because the child does not understand the reasoning behind the process; they only see the results (Lipoff, 2011). This is the stage in which most children enroll in school. Behaviors of children within this stage include deferred imitation, symbolic play (pretending), drawing, mental imaging, and verbal representation of events (Walker, 2004).

In the concrete operational stage, from ages seven to 12, the child begins to deal with abstract concepts such as numbers and relationships. He or she begins to see an object's quantity, no matter the shape. Children in this stage can think concretely and logically about the world they have experienced, but they are not able to think abstractly (Walker, 2004). According to Boddington (2009), biological, environmental, and cultural factors play a very important role in how information is received and processed.

Lastly, in the formal operational stage, ages 12 and beyond, the child begins to reason logically and systematically. Through maturation and environmental intervention, the child reconstructs a new cognitive level that surpasses the earlier stage (Ogletree, 1997). He or she becomes capable of solving hypothetical propositions and deducing consequences: If this happens, then that will happen as a result (Walker, 2004). It is in this final stage of development that children begin to think about others' perspectives (Walker, 2004). Piaget's theory suggests that individuals' thinking develops from concrete to abstract or simple to complex (Fleischman, 2007).

In terms of entrance to school, Piaget's developmental theory suggests that sending a child to school before developmentally ready would not be beneficial. A child may not be considered capable of achieving success if he or she has not reached the appropriate developmental stage (Fleischman, 2007). Although Piaget assigned ages to each of the developmental stages, "it is important to note that the ages are simply a range and do not represent exact age norms" (Fleischman, 2007, p. 11). The ages may be consistent for most children, but some children may enter a stage at an earlier or later age chronologically; therefore, chronological age should only be considered as a guide rather than a criterion for progress. When considering Piaget's theory of cognitive development, school entry should be based on developmental level rather than a specific chronological age. Additionally, once a child enters school, teachers should take the developmental stage of the child into consideration in order to help them determine the most appropriate method of instruction (Ogletree, 1997).

Gesell. Arnold Gesell was a pioneer in the field of developmental psychology (Ames, 1989). He studied young children, especially from birth to age five. He was the first school psychologist in the United States; and he had training as a physician, educator, and developmental psychologist (Eck, 2011). According to Ames (1989), his first area of interest was school readiness, which is where he has the greatest legacy and impact. Gesell's theory is known as a maturational-developmental theory (Gesell Institute of Human Development, n.d.). He also referred to this as "norms of development" (Ames, 1989). He believed that behaviors in humans develop in a highly patterned way (Ames, 1998). The specific fields of development that he studied included (1) a child's motor development, (2) language, (3) adaptive behavior (intelligence), and (4) personal-social behavior (Ames, 1989). Similar to Piaget, Gesell observed natural

and sequential stages of development in children (Thelen & Adolph, 1992). He observed and documented patterns in the way children develop (Gesell Institute of Human Development, n.d.). Like Piaget, he believed that the timing may vary from child to child as each child develops at his or her own pace; however, the sequence of stages is largely unaltered (Ames, 1989). He suggested that children develop in a similar and predictable sequence; but the amount of time a child needs to grow and develop will vary between children, and every child has a unique pattern of development. Furthermore, he suggested that development may also differ by gender (Fleischman, 2007).

According to the Gesell Institute of Human Development (n.d.), this process is made up of both internal and external factors. The intrinsic factors include “genetics, temperament, personality, learning styles, as well as physical mental growth” (Gesell Institute of Human Development, n.d., p. 1). In addition, development is also influenced by external factors such as “environment, family background, parenting styles, cultural influences, health conditions, and early experiences with peers and adults” (Gesell Institute of Human Development, n.d., p. 1). Gesell believed that a child’s preprogrammed genetic makeup was the single most important factor in a child’s development (Ames, 1989).

In relation to school entry age, Gesell’s developmental theory of maturation suggests that school entry is not a simple transition, and the smoothness of school entry largely depends on emotional maturity (Thelen & Adolph, 1992). He believed that children must be 5 years old chronologically *and* developmentally in order to be ready for kindergarten. Reaching a set chronological age does not guarantee development nor does it guarantee that a child is ready for instruction, because not only is each person an individual, but each age has its own individuality (Ames, 1989). He also thought that

children should be grouped together according to their developmental age and not by their chronological age, because he believed that chronological age is a poor indicator of school readiness and performance (Ames, 1989). According to Ames (1989), Gesell stated, “If there is indeed such a thing as human engineering, nothing could be more unscientific than the unceremonious, indiscriminating, wholesale method with which we admit children into our greatest social institution, the public school” (p. 13). As stated by Eck (2011), “a child’s developmental age was a much better indicator of how well the child would be able to perform the tasks typically required in most kindergartens and primary grades than his or her chronological age” (p. 26). Gesell insisted that school performance is affected by maturity and the child’s pattern of growth; and he strongly believed that schools should take into account the developmental maturity of children, a factor he felt was so often ignored (Ames, 1989). According to Fleischman (2007), Gesell stated that “a December versus June birthday may cause an effect on status in kindergarten, and six months difference in chronological age or developmental age may effect adjustment in first grade” (p. 13). He felt that the amount of school failure would be greatly reduced if children started school based on their developmental level or behavior readiness rather than their chronological age (Ames, 1989).

Piaget and Gesell both thought that behavior develops through largely predictable stages and patterns. They also believed that all behavior results from an interaction of hereditary and environmental factors. They both not only discourage the entrance of a child into school before the child is ready, but they also warn that sending a child to school before they are ready will result in negative consequences such as maladjustments, feelings of inadequacy, disappointments, confusion, and misdirected teaching (Fleischman, 2007). Based on the theories of Piaget and Gesell, the researcher developed

the following research questions for this study.

Research Questions

1. Is there a statistically significant difference in reading scores between academically redshirted students and non-academically redshirted students on the third-grade PASS?
2. Is there a statistically significant difference in math scores between academically redshirted students and non-academically redshirted students on the third-grade PASS?
3. To what extent, if any, does gender impact reading scores between academically redshirted students and non-academically redshirted students on the third-grade PASS?
4. To what extent, if any, does gender impact math scores between academically redshirted students and non-academically redshirted students on the third-grade PASS?

Setting

This research took place in a small, rural school district in the upstate region of South Carolina. There are a total of four schools within this district: a primary school that serves 3-year-old kindergarten through second grade; an elementary school that serves third through fifth grades; a middle school that serves sixth through eighth grades; and a high school that serves ninth through twelfth grades. There are approximately 2,900 students in the district. Table 1 shows the ethnicity percentages represented in the district during the 2014-2015 school year.

Table 1

District Ethnicity Percentages-2014-2015

Ethnicity	<i>n</i>	%
American Indian	6	0.21
Asian	27	0.95
Black	379	13.30
Hispanic	229	8.04
Multiracial	105	3.69
Pacific Islander	1	0.04
White	2101	73.77
Total	2848	100

Participants

The participants in this study included students who participated in the South Carolina PASS during their third-grade year. Within this group, the researcher looked at those students who were academically redshirted in kindergarten and compared them to those who were not redshirted in kindergarten. The researcher observed data from multiple years by looking at the third-grade scores from each year PASS was given, 2009-2014.

Eight hundred eighty-two students were included in the study. This number included all of the students within the district who took PASS in third grade while in the district. Of the 882 students, 41 were academically redshirted, while the remaining 841 students were not. There were a total of 436 males and 446 females. Of the 41 students who were redshirted, 27 were male, and 14 were female.

Definition of Terms

Academic redshirting. Refers to the practice of delaying entrance into kindergarten of age-eligible children to allow extra time for intellectual, physical, and/or social and emotional growth (Jones & Sutherland, 1981; Katz, 2000; McNamara, Scissons, & Simonot, 2004).

Compulsory school age. Refers to the minimum and maximum age required by each state in which a student must be enrolled in and attending public school or some equivalent education program defined by the law (Education Commission of the States [ECS], 2005).

Cut-off date. A deadline date that requires students to meet the age requirement set forth by the school board or district (Narahara, 1998). In South Carolina, the cut-off date is September 1st.

Enrich. An online database that manages all of the data for all educational programs for all of the students in the district (Excent, 2010).

Kindergarten. The beginning year of the standard American K-12 educational school system. Typically, students enter kindergarten around the age of five (Kauerz, 2005).

Kindergarten readiness. The concept that children have developed social, physical, and cognitive skills necessary to learn in a structured environment (Malone, West, Flanagan, & Park, 2006).

Over-placement. Refers to a child being placed in an academic setting that is over the child's developmental readiness and in which the child's individual needs are not able to be met (Guddemi & Marchesseault, 2009).

PASS. A standards-aligned test given in South Carolina designed to meet NCLB

requirements. It is administered in Grades 3-8 in writing, English language arts, mathematics, science, and social studies.

PowerSchool. A web-based student information system. It provides a full range of features needed by administrators at the district and school level in addition to portals for teachers, parents, and students (Pearson, 2014).

Summary

This chapter provided a statement of the problem, purpose and significance of the study, placed it in a theoretical context, and stated the research questions. The setting of the study and key terms and their definitions were also provided. The study examined a set of data to determine if there was a significant difference in scores on the third-grade PASS in reading and math between students who were academically redshirted and students who were not academically redshirted. Gender was also factored into the comparison in order to allow the researcher to determine if gender shared a relationship with these scores on the third-grade PASS. Chapter 2 presents a review of the literature that is relevant to the current study.

Chapter 2: Literature Review

Introduction

Educators, parents, and policymakers are concerned with the topics of age and gender and their effects on academic achievement. The review of the literature covers relevant topics associated with these issues. This chapter provides an overview of kindergarten, academic redshirting, and gender differences in education to present relevant literature and research in these specific areas. The literature review begins with the historical context and definition of academic redshirting. Additionally, this section provides information on the history of kindergarten and legislation dealing with school entry age. The second part of the literature review provides explanations regarding why parents, teachers, and administrators may choose to delay entrance into kindergarten for some students. These include physical development, cognitive development, and social and emotional development. The characteristics of students who are most likely to experience delayed entry into school are discussed in section three. Ethnicity, gender, and socioeconomic status are the key areas of focus within section three. Subsequently, the fourth section reviews the findings from various researchers on the advantages and disadvantages of academic redshirting, and the final section examines the impact of gender on education. The research contained in Chapter 2 defines the main components in this study: age of entry into kindergarten and gender, in determining the impact that they have on academic redshirting.

Academic Redshirting and its Historical Context

Kindergarten—past and present. Kindergarten was once an environment where children were introduced to the expectations and challenges of a formal school setting. It was a haven for children to grow, cooperate, live together, and learn how to learn

(Roberts, 1986). During the 19th century, the pioneer of kindergarten, Friedrich Froebel, described an environment where children could grow physically, socially, and spiritually (Spodek, 1981). He called his vision and educational plan for young children a kindergarten, a “children’s garden” (Vecchiotti, 2001). Froebel opened his first kindergarten with the idea that the creativity of children is best nurtured through play, and each child learns and develops at his or her own natural pace (Kauerz, 2005). Teachers promoted self-expression, social relations, and intellectual curiosity through play and activities such as singing and dancing (Vecchiotti, 2001).

Education has changed over the years, and children today have many new skills to learn before their first day of kindergarten. The idea of kindergarten being a place where children develop cognitively, physically, and socially is still apparent in today’s kindergarten; but the focus has been shifted. Gradually, the kindergarten curriculum has been modified to more closely resemble that of an elementary school. According to Spodek (1981), “The distinction between the kindergarten and the primary grades seems to be disappearing in American schools” (p. 2). The launch of Sputnik in the Soviet Union was a major event that played an important role in the large leap for early education programs. The Soviet Union had surpassed the United States in space technology, so the United States wanted to increase educational accountability; and it started in kindergarten. More emphasis was placed on standardized tests where scores would be available to show areas of need and areas of improvement (Hewes, 1995).

As kindergarten continues to evolve, teachers can no longer base their curriculum exclusively on the interests and developmental needs of the children (Narahara, 1998). Emphasis has been placed on a structured curriculum that focuses on a detailed set of content standards. “Today, as a consequence, kindergarten is pulled between the

developmental, child-centered focus of early care and education and the academic achievement focus of the formal K-12 system” (Kauerz, 2005, p.1). Early education of young children has increasingly focused less on socialization and more on the development of academic skills (de Cos, 1997). Many kindergartens no longer seek to promote all areas of children's development but tend to focus only on the academic skills that were once taught in first grade (Vecchiotti, 2001). Although there should be high expectations for students who are entering kindergarten, policies that set standards for student performance assume all students start out at the same level and ability. The students’ abilities, interests, and experiences are not often factored into such policies (Barron, 2007). The National Association for the Education of Young Children proposed that developmentally appropriate kindergarten classrooms should support the stimulation of a child’s self-esteem, should emphasize the importance of cultural diversity and identification, and should reinforce their independence and special strengths. As curriculum and expectations continue to increase, the question is no longer *if* a child should attend kindergarten but *when* a child should enter into kindergarten (Stinson, 2013). There are various ways to assess whether a child is ready for school, but age is used most often to determine eligibility. The appropriate age for students to begin school is an issue for debate among parents, teachers, and administrators. Currently, there are no national standards that dictate school entrance age. Each state has developed standards of its own.

Legislation on school entry age. According to the 2013 50-State Analysis conducted by ECS (2013), there is no universal age for compulsory attendance in the nation. Children are currently required in some states to start school at age five; and in others, children may wait as late as 8 years old. The majority of the states, however,

require students to begin their formal education at the age of six. In eight states and the District of Columbia, the compulsory school age is five. In 25 states, the compulsory school age is six. The compulsory school age is seven in 15 states, and eight in only two states. Table 2 shows the compulsory school age for each state in the United States.

Table 2

Compulsory School Age

Age			
5 years old	6 years old	7 years old	8 years old
Arkansas	Alabama	Alaska	Pennsylvania
Connecticut	Arizona	Idaho	Washington
Delaware	California	Illinois	
District of Columbia	Colorado	Indiana	
Maryland	Florida	Kansas	
New Mexico	Georgia	Louisiana	
Oklahoma	Hawaii	Maine	
South Carolina	Iowa	Minnesota	
Virginia	Kentucky	Missouri	
	Massachusetts	Montana	
	Michigan	Nevada	
	Mississippi	North Carolina	
	Nebraska	North Dakota	
	New Hampshire	Oregon	
	New Jersey	Wyoming	
	New York		
	Ohio		
	Rhode Island		
	South Dakota		
	Tennessee		
	Texas		
	Utah		
	Vermont		
	West Virginia		
	Wisconsin		

Note. ECS (2013).

There are some consistencies between the states regarding the most appropriate

age for the start of kindergarten despite the lack of agreement as to the age of compulsory attendance. The kindergarten entrance age is the date by which a student must be 5 years old in order to attend kindergarten (ECS, 2013). According to ECS, seven states gave their local education agencies (LEAs) the option to choose the date by which a child must be 5 years of age. The remaining states require a student to be 5 years old by a certain date in order to attend kindergarten. Two states have kindergarten entrance cut-off dates between November 1 and January 1. This practice leads to a larger mix of 4- and 5-year-old kindergarteners. Thirty-four states have cut-off dates between August 31 and October 15. While these policies lead to fewer 4-year-old kindergarteners, classrooms still have a combination of 4 and 5 year olds in the fall. Six states have cut-off dates on or before August 1. Although this cannot be determined without additional research, it does suggest that these states would like to ensure that all children turn five before they begin kindergarten. Seven states leave the decision up to local districts (Kauerz, 2005). In South Carolina, a child must turn five on or before September 1st before he/she can begin kindergarten. Table 3 shows the wide range of cut-off dates for kindergarten students in the United States. Even though age is used most often to determine school eligibility, there are many parents, teachers, and administrators who believe that the decision cannot be made based on age alone. Some parents and educators feel that some students need to delay entrance into kindergarten by a year in order to be better prepared for kindergarten.

Table 3

Cut-off Dates for Kindergarten Eligibility

Date	State(s) Using Cut-off Date
July 31	Hawaii Missouri Nebraska North Dakota
August 1	Arkansas Indiana
August 15	Tennessee
August 31	Arizona Delaware Kansas New Mexico North Carolina Washington
September 1	Alabama Alaska California Florida Georgia Idaho Illinois Maryland Minnesota Mississippi Oklahoma Oregon Rhode Island South Carolina South Dakota Texas Utah West Virginia Wisconsin
September 10	Montana

(continued)

Date	State(s) Using Cut-off Date
September 15	Iowa Wyoming
September 30	District of Columbia Louisiana Nevada Virginia
October 1	Colorado Kentucky Michigan
October 15	Maine
January 1	Connecticut
LEAs Decide	Massachusetts New Hampshire New Jersey New York Ohio Pennsylvania Vermont

Note. ECS (2013).

Academic redshirting. The changes in legislation have made it difficult for parents, teachers, and administrators to accept children who have late birthdays into a content-driven kindergarten program where their developmental levels may not be conducive to a rigorous curriculum. These changes have caused parents and educators to take other precautionary measures. Due to the higher academic standards and increased accountability in kindergarten, many parents, teachers, and administrators are considering holding students back and delaying their kindergarten entry by 1 year (Frey, 2005; Marshall, 2003; Vecchiotti, 2001). Some parents may consider delaying kindergarten entrance due to the child's maturity level. Other parents choose to delay entrance into

kindergarten because the child's birthday is just a couple of months before the school entrance cut-off date, while other parents choose to delay entrance in order to give their child an extra advantage (Marshall, 2003). This practice is known as academic redshirting. Redshirting is a very commonly used term among university athletic departments. The term is derived from a practice in athletics in which a beginning athlete is placed on reserve and ineligible to play for his first season in order to give him an extra year to further grow and mature as a player in hopes of improving his skills for future seasons. Academic redshirting for young children refers to the practice of delaying entrance into kindergarten of age-eligible children to allow extra time for intellectual, physical, and/or social and emotional growth (Jones & Sutherland, 1981; Katz, 2000; McNamara et al., 2004).

According to the National Center for Education Statistics (NCES, 2010), 5.9% of kindergarteners delayed entrance into kindergarten in 2010. Over 38% of these delayed kindergarten entrants were older than 6 years old when they entered kindergarten (NCES, 2010). One may think that an increase in preschool attendance would reduce the need of delayed entry, but Graue and DiPerna (2000) found the opposite to be true. They found that despite the increase in recent preschool attendance, there has also been an increase in the number of students who have delayed entry into kindergarten. They examined the school records of more than 8,000 students and determined that there was a 7% incidence of delayed entry; however, they caution that this calculation is likely an underestimate of the actual occurrence due to the fact that an additional 3.2% was not included in the data because it was unknown if those students were retained or delayed school entry. Graue and Diperna also found that age had no statistically significant effect on student achievement even in the early grades, and they noted that children who delayed their

entrance into school by a year or more were likely to receive special education services.

May, Kundert, and Brent (1995) examined the effects of delayed entry on later elementary school grade retention and referral for special education services in a suburban school district in New York. May et al. analyzed the data of over 3,000 students with delayed entry and found that students with delayed entry were most often male, and they were placed in special education programs in significantly higher proportions than were the students who started school when they were age-eligible.

Lincove and Painter (2006) studied the long-term effects of age at school entry on the outcomes beyond high school including graduation rates, college enrollment, and salaries in early adulthood, with special attention to those who entered kindergarten a year later than their peers. Lincove and Painter used data from the National Educational Longitudinal Study (NELS) which drew from a sample of 1,000 schools and totaled 25,000 nationally represented eighth-grade students. While controlling for gender and socioeconomic status, Lincove and Painter determined that with respect to long-term outcomes, young students have slightly better outcomes on average than redshirted students as long as there was no retention in any grade. They found that young students who started school “on time” were more likely than redshirted students to attend college, graduate from college, and earn higher salaries at the age of 25. They found that the redshirted students had slightly lower twelfth-grade achievement scores and were twice as likely as young students to drop out of high school.

Crosser (1991) analyzed data from seven public city school districts in Ohio. The purpose of her study was to examine associations between age at school entry in kindergarten and academic performance through sixth grade. She found that males with summer birthdates tended to be advantaged academically by postponing kindergarten

entrance by 1 year. Teltsch and Breznitz (1988) found similar results. Their results indicated that differences of several months can have a significant effect on academic achievement and school adjustment. Studies of redshirted students, which have had mixed results, were examined and are discussed.

As stated previously, there are many different reasons parents choose to delay the entrance of kindergarten. Some parents feel like their child may not be physically, cognitively, or socially and/or emotionally ready to begin school. It is important to look at these specific areas of development to further understand why parents may choose to redshirt their children.

Reasons to Redshirt

Even though a child may be old enough to begin school, there are other factors that must be considered when deciding if a child is ready. Just because a child is old enough to start school does not mean that the child is developmentally ready to succeed in school (Holloway, 2003). In addition, if a child is overplaced into kindergarten and the academic setting is beyond the child's developmental readiness and his or her needs are not met, the child can experience some negative consequences. Some children in this situation show signs of stress and strain (Guddemi & Marchesseault, 2009). They can display obvious behaviors such as fatigue, inconsistent visual and hearing perceptions, a lack of friends, anger against peers, withdrawal, difficulty finishing work, erratic achievement, mood swings, and not wanting to go to school. Other behaviors that may be more difficult to notice include avoidance of problems; daydreaming; conformity by trying to please others and exhibiting very little creative thinking; passive resistance by being pleasant but not doing what is asked; and overdrive, which is exhibited through high social and academic skills, high creativity, and interest in grades. Students in

overdrive may be at a great risk for eventual burnout (Guddemi & Marchesseault, 2009).

Over several years, the Starting School Research Project, based out of the University of Western Sydney in Australia, investigated which factors teachers, parents, and children considered important in the transition into kindergarten (Dockett & Perry, 2003). Dockett and Perry (2003) identified eight important areas that affect transition into school:

1. Knowledge—ideas, facts, and/or concepts that children know (for example, the ability to identify letters and numbers).
2. Social adjustment to the school context—for example, knowing how to interact with a large group of children or responding appropriately to the teacher.
3. Skills—for example, holding a pencil appropriately and tying shoelaces.
4. Disposition—attitudes toward school.
5. Rules—the expectations of behavior and action.
6. Physical characteristics or attributes—for example, general health and age.
7. Family issues—family interactions with the school and changes to family life brought about by children starting school.
8. Education environment—what happens at school (p. 30).

Dockett and Perry (2003) suggested that “children who make a smooth transition and experience early school success tend to maintain higher levels of social and academic achievement” (p. 30).

Dockett and Perry (2003) also indicated some differences among the responses of the children, parents, and teachers regarding their views about what matters most as children start school. Parents and teachers cited children’s social adjustment more than any other category. While children also mentioned social adjustment, the categories of

rules and disposition was of most importance to them. Rate of development will vary across domains (Zill et al., 1997). While a child may excel academically, he may be behind on his social development. These different developmental domains are important factors parents consider when deciding if their child is ready for school.

Physical. When deciding if a child is ready for school, some parents, teachers, and administrators may consider the physical size of the child. While there are not many studies that directly relate to physical stature and school entry, there is some research regarding the acquisition of gross and fine motor skills. After analyzing data from over 19,000 kindergartners, researchers concluded that older children have better coordination than younger children, both in gross and fine motor skills (Zill & West, 2001). The older kindergartners were two-thirds more likely to score in the top portion for gross motor skills and twice as likely to score in the top third on fine motor skills. If a child is not physically capable of performing everyday tasks such as using a pencil, the physical demands could be harmful to that student (Fleischman, 2007).

Cognitive. According to Fleischman (2007), of all the developmental domains, one study reported that parents were most concerned about their child's academic readiness for school. There are multiple studies relating to age and academic achievement. As noted earlier, these studies yield varying results. Some studies, however, do show a correlation between entry age and academic achievement. Some studies have shown older students to outperform their younger peers in areas of language arts and math. Stipek and Byler (2001) found that older students had an advantage in literacy achievement. Teltsch and Breznitz (1988) also found discrepancies between younger and older students. They found that older first graders scored higher in reading than the younger first graders. The older students had fewer reading errors, greater

comprehension, better vocabulary, and read at a faster pace; and even among high-ability or gifted students, there was a discrepancy between the youngest and oldest students (Fleischman, 2007). The younger students had lower scores on achievement than their older classmates (Fleischman, 2007). Coley (2002) found older students to be more proficient in math than younger students. Research findings indicate that older students perform better in math than younger students (Stipek & Byler, 2001; Teltsch & Breznitz, 1988; Zill & West, 2001); and according to Zill and West (2001), classroom teachers stated that older kindergartners were more eager to learn, pay attention, and complete tasks and activities. The area of cognitive development definitely receives the most attention and consideration from parents, teachers, and administrators due to accountability and high-stakes testing.

Social/emotional. Many parents and educators take social maturity and development into consideration when determining when a child should begin kindergarten. Zill and West (2001) found that older children tend to be more mature. They were also more likely to demonstrate cooperative behavior. Other researchers convey similar findings. A study conducted by Menet, Eakin, Stuart, and Rafferty (2000) observed behavioral traits among students in a classroom. The teachers in the study stated that the youngest children do not behave as well as the older children. The younger children were described as requiring more direct supervision and having the most difficulty in following directions and concentrating. The authors were concerned that the lack of developmental maturity was misinterpreted as misbehavior. Not all researchers have drawn the same conclusions. Stipek and Byler (2001) found no significant relation in conduct and entry age.

Since age is still the ultimate factor affecting school entry, many students may

enter school and not be completely ready for the demands of the classroom, while other parents may delay their child's entry into kindergarten whether they need to or not. It is valuable to further investigate the characteristics of students who are most likely to be redshirted.

Characteristics of Redshirted Students

As Holloway (2003) stated, just because a child is old enough for school does not mean that the child is developmentally ready to be successful in school. Although students' ages may be similar, their development may vary. Stipek and Byler (2001) reported that development is uneven and age alone cannot be the ultimate predictor of later behavior and skill attainment. While Graue and DiPerna (2000) reported that most redshirted children tended to be younger boys who were more likely to be of color and come from poverty, the majority of the research examined reported different findings. There were four main characteristics that seem to be reoccurring: chronological age, ethnicity, gender, and socioeconomic status.

Ethnicity. Frey (2005) reported that a child's ethnicity was a predictor of redshirting. Frey found that White, non-Hispanic children were more likely to be academically redshirted than African-American children. This is consistent with the findings of Coley (2002) that determined Black, Hispanic, and Asian populations were more likely to be among the youngest kindergartners. Graue and DiPerna (2000) had quite different findings. In their study of enrollment data of 8,000 Wisconsin students, Graue and DiPerna found that children of color were more likely to be redshirted. Table 4 shows the ethnicity breakdown of students in the United States who delayed their entry into kindergarten.

Table 4

Ethnicity of Students who Delayed Entry into Kindergarten

Ethnicity	%
American Indian	7.9
Asian	6.1
Black	3.1
Hispanic	3.7
Multiracial	6.6
White	7.4

Note. NCES (2010).

Gender. For gender, researchers have concluded that males were more likely than females to delay entrance into kindergarten (Frey, 2005; Graue & Diperna, 2000; Zill et al., 1997). Based on the 2010 data from NCES, 6.8% of delayed kindergarten entrants were male and 4.9% were female. These statistics seem to correlate with the data of other researchers. Boys are often viewed as less mature than girls and not as academically ready, which could help explain the reason for such differences in gender (Ede, 2004).

Socioeconomic status. The relation of socioeconomic status and entry age has been explored as well. Findings indicate that parents from middle class or above middle class were most likely to redshirt their children (Frey, 2005). Delaying entry into school can cause financial burdens for some families, so they are forced to enroll their children in school as soon as they are age-eligible, no matter if they are developmentally ready or not; therefore, lower income families are less likely to delay enrollment (Frey, 2005). They do not have any other options. According to the 2010 data from NCES, the majority of the redshirted students were from upper class families. Table 5 shows the

percentage distribution of students according to socioeconomic status who delayed entry into kindergarten. Equally, Stipek and Byler (2001) found those from lower socioeconomic backgrounds were less likely to delay their child's entrance into kindergarten. The researchers calculated that less than 1% of the students from the lower socioeconomic schools had delayed entrance into school compared to the 10% national average.

Table 5

Delayed Kindergarten Entrants by Socioeconomic Status

Socioeconomic Status	%
Lowest 20 percent	4.3
Middle 60 percent	5.9
Highest 20 percent	7.2

Note. NCES (2010).

Regardless of who is redshirted (males, females, Caucasians, Blacks, Hispanics, Asians, lower, middle, or upper class), it is critical to examine the advantages and disadvantages of academic redshirting.

Effects of Academic Redshirting

The research on academic redshirting is both contradictory and inconclusive as to whether it works and for how long (Day, 2011). The research shows advantages and disadvantages of academic redshirting. Both are discussed.

There seems to be agreement among educators and administrators that younger children who are given an extra year to mature enter kindergarten with more social skills, greater confidence, an enhanced ability to focus, and an increased readiness to learn (Day, 2011). Day (2011) also affirmed that there is a documented initial boost in math

skills, reading skills, and general knowledge. In contrast, there are several factors that many researchers question regarding the efficacy of redshirting (Day, 2011). According to Day, if children with late birthdays are very intelligent, they may be bored if they are held back simply because they are young chronologically. In addition, if they are redshirted, they may have difficulty relating to their younger classmates (Day, 2011).

Advantages. Several researchers have found advantages to academic redshirting. In a study performed by NCES (2013), 73% of kindergartners who were about to turn six at the beginning of the school year were able to identify letters by name, link sounds with letters, and read easy sight words. Only 56% of their 5-year-old counterparts were able to do the same thing (Zill et al., 1997). They also found that students who delayed entrance into kindergarten outperformed their younger peers in first and second grade. This shows that older students have a definite advantage when it comes to early literacy skills.

There is also data to support a relationship between a child's age and proficiency in early math skills. Sixty-six percent of kindergartners who were six or about to be six were able to read numbers, count past 10, recognize patterns, and compare relative lengths of objects. Only 42% of their 5-year-old counterparts could do those same skills (Ede, 2004). According to this data, older students are shown to have an advantage in mathematics skills as well.

According to Ede (2004), students who are closer to six when entering kindergarten were more likely to engage in cooperative behavior. They were less likely to be argumentative. Older children were also described as being more persistent at completing academic tasks, having more positive feelings towards their teachers, feeling more valued, and taking leadership roles in the classroom. They were also less likely to

receive negative feedback from their teachers (Ede, 2004). These attributes show an advantage in social skills.

In relation to Ede's (2004) findings, Grimes (n.d.) found that developmentally younger students have a more difficult time following class routines and rules, more problems with their attention level, a harder time staying seated, poor fine and gross motor skills, and a more difficult time adapting their behavior when changing from one activity to another. Grimes stated,

We must take the whole of the child into consideration when deciding whether or not to send our children to school, not just that they are legally old enough to enter into the public school system. A child who is developmentally younger can greatly benefit by having the opportunity to mature both socially and academically before entering into school. (p. 5)

West, Denton, and Reaney (2000) also found some positive results from academic redshirting. They reported that in the spring of kindergarten, on average, the younger students displayed lower reading and math skills than the older students. Furthermore, they also found that the older students had longer attention spans, were more persistent, and generally showed more enthusiasm for learning.

Although Guddemi and Marchesseault (2009) stated that delaying kindergarten entry does not have long-term effects on academic success for the average child, they did convey that there may be some immediate, short-term benefits of academic redshirting such as an increased motivation to learn, a stronger self-concept, and less stress associated with the learning environment. Guddemi and Marchesseault stated,

One of the most important goals of kindergarten is to love learning and create an "I can learn!" attitude in the child. When children are overplaced, they often feel

like they are failures and may complain of stomach aches so they don't have to go to school. (p. 78)

Disadvantages. While some researchers have found advantages in academic redshirting, many have found some disadvantages. Even though delayed entry into kindergarten may give a child an advantage while he or she is in kindergarten, there is very little evidence to suggest that this advantage carries over into the later school years (Ede, 2004). Stipek and Byler (2001) conducted a 4-year study with 200 students in California to determine if age was related to academic performance. They found that the older students outperformed the younger students while they were in kindergarten, but the advantage completely disappeared by third grade. While the older students may initially perform better academically, these positive outcomes are very limited and seem to fade out as time goes on (Shepard & Smith, 1986).

There is also evidence that some first through third graders who were redshirted in kindergarten now require greater use of special education services than their non-redshirted classmates (Katz, 2000; McNamara et al., 2004). Furthermore, there are other studies which show that many individuals who were redshirted in kindergarten may have had special needs that were misdiagnosed as immaturity and that should have been treated by some form of direct intervention other than delaying entry into school (Katz, 2000).

Marshall (2003) reported that on average, delaying entry has no long-term effect on academic achievement; however, the combination of youngness and low ability may have negative effects for achievement. Marshall also stated that holding children out a year deprives them of instruction that can promote learning of many different skills. Lastly, Marshall noted that holding children out a year does not result in any social

advantage. Marshall said there are no differences in peer acceptance or in self-concept. In contrast, some children who are redshirted worry that they have failed, they begin to develop poor attitudes about school, and they are more likely to have behavioral problems later on and drop out.

Academic redshirting can also deny children of opportunities of cognitive growth through social interaction with their same-aged peers and implies that these children have failed at school even before they begin (Diamond et al., 2000). In addition, another potential problem caused by redshirting is that it raises the average age of the kindergarteners which can cause policymakers to expect more academically out of the entire class and put too much emphasis on the academic achievements of students in kindergarten (Diamond et al., 2000).

In the research presenting the advantages and disadvantages of academic redshirting, some researchers take gender into account when analyzing the data. It is necessary to review more information on gender differences in education to more fully understand the impact that gender has on academic redshirting.

Gender Differences in Education

Gender becomes an issue when trying to decide whether or not to delay entry into kindergarten. Looking at student gender as a variable that affects readiness for school and student success dates back to the early 1970s where researchers like Rubin (1972) paired longitudinal studies of more than 900 kindergarten through second-grade students' school readiness and academic performance with numerous individual testimonials from kindergarten and first-grade teachers to determine whether or not gender differences were present at the start of school and whether or not they can affect student success. Rubin's studies found an extensive amount of research supporting the notion that "girls tend to

enter school with greater readiness for school learning activities than boys of the same age” and “girls were ahead of boys particularly from the age of five to the age of six” (p. 265).

Gender differences have been shown to be connected to academic success. Much of the reviewed literature mentions the fact that this variable can make a difference in achievement in school (Crosser, 1991; Ede, 2004; Grimes, n.d.; Narahara, 1998; Zill et al., 1997). Boys are often viewed as less mature than girls and not as “academically ready” (Ede, 2004, p. 207). According to Eliot (2010), over the last 40 years, girls have consistently outperformed boys in reading and writing on the National Assessment of Educational Performance (NAEP). The 2000 NAEP found that boys are typically one and one-half years behind girls in these subjects (Gurian & Stevens, 2004). Gurian and Stevens (2004) stated that “our boys are now losing frightening ground in school, and we must come to terms with it” (p. 24). Gurian and Stevens reported the following statistics for academic achievement for boys in the United States:

- Boys earn 70% of Ds and Fs and fewer than half of all the As.
- Boys account for two thirds of learning disability diagnoses.
- Boys represent 90% of discipline referrals.
- Boys dominate such brain-related learning disorders as ADD/ADHD with millions now medicated in schools.
- Eighty percent of high school dropouts are males.
- Males make up fewer than 40% of college students.

Gurian and Stevens (2004) reported that these statistics remain true for boys around the world. Based on a 3-year study by the Organization for Economic Co-operation and

Development, girls outperformed boys in 35 industrialized countries including the United States, Canada, the European countries, Australia, and Japan (Gurian & Stevens, 2004).

While it is commonly believed that boys mature later than girls, NCES (2000) reported that there was little difference in their early academic skills. The differences between boys and girls upon entering kindergarten were mainly behavioral and developmental. NCES (2000) reported that boys had more trouble paying attention, were more active, and had fewer communication skills. In addition, boys generally came to school with less advanced reading skills than girls.

According to Graue and DiPerna (2000) and Zill et al. (1997), male students are more likely to wait a year to begin school as well as to be retained than are female students. Girls are more likely to enter early. This suggests that male students' academic performance may be less than that of female students at the same age. Ede (2004) also suggested that females have a slight academic advantage when entering kindergarten. Seventy percent of all female students entering kindergarten knew their letters when entering. Only 62% of male students had the same knowledge (Ede, 2004). Thirty-two percent of the girls could associate letters with beginning and ending sounds, compared with 26% of boys (Ede, 2004). Lastly, twice as many boys as girls had difficulty paying attention and speaking clearly (Ede, 2004). According to these statistics, females clearly seem to have an academic advantage over male students at this age.

In Narahara's (1998) research of gender and academic performance, she compared reading and math scores of boys and girls in second grade. Narahara found that female students surpassed male students in both areas. The female average for reading achievement was 53, compared to the male average of only 35. The average math achievement score for females was 38, and it was 25 for males. The differences in

average scores between the two genders showed a greater difference in achievement in reading than in math, while female students outperformed the male students in both areas. DeMeis and Stearns (1992) suggested that gender may be a more important factor to consider than age when determining when a child should begin school.

In addition, Ostrov and Keating (2004) reported that gender differences extended into free play and structured activities. Ostrov and Keating determined that both boys and girls could be aggressive, just in different ways. Girls seemed to be more aggressive in their relationships, and boys were more aggressive verbally and physically (Ostrov & Keating, 2004).

Despite an extensive amount of research evidence of the existence of gender differences in education, the widely recognized developmental age difference between males and females of the same age is almost disregarded in educational planning for children in their early years (Rubin, 1972). Given this information, it is crucial that further investigation into gender differences in education be implemented in order to make others more aware of its importance and relevance in the curriculum planning process.

Summary

There are many different factors to consider when determining if a child is ready to begin kindergarten. Although a child may meet the state's eligibility requirements for school entry, age is not the only area that parents and educators should keep in mind. Factors such as gender and previous experience are both areas that parents and educators should evaluate to decide when a child is ready to enter school. Chapter 2 reviews relevant literature related to the issues concerning school entry age, academic redshirting, and gender differences. Chapter 3 provides specific information regarding the methods

used to conduct this study and details the participant, instruments, and procedures. It also includes limitations and delimitations of the research.

Chapter 3: Methodology

Introduction

The ages of students who are entering into kindergarten can vary greatly within classrooms and school districts. Parents, teachers, and administrators are often confused by contradictory data concerning the best time to enter kindergarten. Parents often worry that beginning a child before he or she is ready will be detrimental later in their school years. There is a need to determine if there is a relationship between kindergarten entry age of students and their scores on the third-grade South Carolina PASS based on their gender.

The purpose of this quantitative study was to determine if there was a significant difference in scores on the third-grade South Carolina PASS in reading and math between students who were academically redshirted and students who were not academically redshirted. This study also investigated whether gender has an impact on academic success between students within these two groups.

This chapter describes methods used to conduct this study and details the participants, instruments, and procedures of the study. It also includes limitations and delimitations of the research.

Research Design

The research design that was implemented in this study was a quantitative quasi-experimental design. In quasi-experiments, the researcher uses different groups but the participants for each group are not randomly assigned (Creswell, 2014). In this study, the participants were chosen based on their birthday. They were then placed in one of two groups: students who have been redshirted and students who have not been redshirted. The participants of this study were not randomly chosen. They had to meet a certain

criteria: participated in the South Carolina PASS during their third-grade year.

Additionally, this study was a between-subject design. A between-subject design is defined as a study in which the researcher compares two or more groups (Creswell, 2014). The researcher compared third-grade PASS scores between two groups of students: those who were redshirted and those who were not redshirted. The researcher also compared scores between males and females.

Participants

This research took place in a small, rural school district in the upstate of South Carolina. The assistant superintendent granted the researcher permission to conduct the study within the district (Appendix A). The participants in this study only included students who participated in the South Carolina PASS during their third-grade year. Within this group, the researcher looked at those students who were academically redshirted in kindergarten and compared them to those who were not redshirted in kindergarten. The researcher observed data from multiple years by looking at the third-grade scores from each year PASS was given, 2009-2014.

Eight hundred eighty-two students were included in the study. This number includes all of the students within the district who took PASS in third grade while in the district. Of the 882 students, 41 were academically redshirted, while the remaining 841 students were not. There are a total of 436 males and 446 females. Of the 41 who were redshirted, 27 were male and 14 were female.

Instruments

The South Carolina PASS is a standardized test that is administered to all South Carolina public school students including charter school students in Grades 3-8 (South Carolina Department of Education, 2014). The purpose of the test items is to measure

student performance on the South Carolina State Standards. The results are used for school, district, and federal accountability purposes (South Carolina Department of Education, 2014).

PASS was first administered in 2009 (South Carolina Department of Education, 2014). The writing test is administered over 2 days in March, and the remainder of the test is administered in May. PASS includes tests in five subject areas: writing, English language arts (reading and research), mathematics, science, and social studies. All students in Grades 4 and 7 take the science and social studies test, and students in Grades 3, 5, 6, and 8 take either the science or the social studies test. Approximately half of the students in these grades (per school) are randomly assigned to take the science test; the other half are assigned to take the social studies test (South Carolina Department of Education, 2014).

The PASS writing test includes one extended-response item which is completed on day 1. This item requires students to write a composition on a given topic. Day 2 of the writing test consists of multiple-choice items. Most of these items are related to editing passages (South Carolina Department of Education, 2014). All of the other tests (English language arts, mathematics, science, and social studies) contain multiple-choice items. The multiple-choice items on the English language arts test are related to reading passages (South Carolina Department of Education, 2014).

Total scale scores and performance levels are provided for each test: writing, English language arts, mathematics, science, and social studies (South Carolina Department of Education, 2014). The three performance levels are categories that represent the overall skills and knowledge demonstrated on each test. The three performance levels are exemplary, met, and not met. If a student scores exemplary,

he/she demonstrated exemplary performance in meeting the grade-level standard. If a student scores met, he/she met the grade-level standard; and a student scoring not met did not meet the grade-level standard (South Carolina Department of Education, 2014).

Table 6 identifies the third-grade cut-off scores for each performance level.

Table 6

Third -Grade PASS Cut-off Scores by Subject Area

	Not Met	Met	Exemplary
ELA	300-599	600-642	643-900
Math	300-599	600-641	642-900
Science	300-599	600-648	649-900
Social Studies	300-599	600-652	653-900
Writing	300-599	600-637	638-900

Note. South Carolina Department of Education (2014).

Since PASS is a state-wide assessment for South Carolina, a standard set of written and oral instructions are provided each time the test is administered. Monitors are also assigned throughout schools during testing to ensure that each test administrator is adhering to those instructions. Teachers and other test administrators also receive training each year to eliminate inconsistencies in scores which promotes reliability and validity of this assessment.

Procedures

This study used test data from the South Carolina PASS from the years 2009 to 2014. Enrich, an online database that manages all the data for all educational programs for all of the students in the district, was used to access individual student assessment data (Excent, 2010). PowerSchool, a web-based student information system used throughout South Carolina, was used to gather additional student data including age at

kindergarten entry, birthday, and gender (Pearson, 2014). The researcher wrote a letter to the assistant superintendent of the district asking for permission to access the data from these databases.

First, the researcher used PowerSchool to determine the birthday and gender of the students in each grade level. The researcher ran a report using students' school identification numbers to ensure the participants and their scores were kept completely anonymous. Next, the researcher separated the students into two categories: (1) those who were at the correct age for their current grade level and (2) those who were older for their current grade level. The researcher then focused on those students who were older for their grade level. Using the students' school identification numbers, the researcher was able to determine which students had been retained and which ones had been academically redshirted by examining their records within PowerSchool and Enrich. Also, of these students, only the ones who took PASS in third grade while in the district between the years of 2009-2014 were considered.

Once the required database was selected, the researcher obtained all third-grade PASS scale scores from the students included within the database. The researcher created a spreadsheet to record information for each student in each group. The researcher kept one spreadsheet for redshirted students (Appendix B) and a separate spreadsheet for non-redshirted students (Appendix C). The spreadsheet included an identification number (that was created by the researcher to keep student identities anonymous) for each student, birthday, gender, third-grade PASS scale score for reading, and third-grade PASS scale score for math. Once all of the data were collected, the researcher compared means by using an independent-samples *t* test to determine if a difference existed between the means of the two groups on a continuous dependent

variable (Laerd, 2013). For this study, the two groups were (1) students who were academically redshirted and (2) students who were not academically redshirted. The dependent variable was academic success based on PASS scale scores. The reading and math scale scores were used to determine if a difference existed between the two groups. Furthermore, the independent-samples t test also determined whether the difference between the two groups was statistically significant (Laerd, 2013). The information gathered from the independent-samples t test were used to answer Research Questions 1 and 2.

The researcher then used a two-way analyses of variance (ANOVA) to determine whether there was an interaction effect between two independent variables on a continuous dependent variable (Laerd, 2013). For this study, the two independent variables were gender and school entry age (between the students who were redshirted and those who were not redshirted). Once more, the dependent variable was academic success based on PASS scales scores, and the researcher used reading and math PASS scale scores to determine if a statistically significant difference existed between the two subject areas. The information gathered from the two-way ANOVA was used to answer Research Questions 3 and 4.

The data were then further evaluated to determine how students who were academically redshirted performed as compared to their peers who had not been academically redshirted. Additionally, the researcher further evaluated the data to determine how the male students who were academically redshirted performed as compared to their male peers who had not been academically redshirted; and the same was carried out with the data obtained for the females from each group.

Limitations

There may be several limitations of this study. The first being sample size. Since there are only 41 participants who were redshirted, the sample size may be too small to suggest that the results of this study could remain consistent in further studies. Second, this study was limited by district. Because all districts are different, the results of this study cannot be generalized to represent other districts. Last, since this study was based on PASS scores, it only represents students in South Carolina, and the results cannot be generalized to represent the national population.

Delimitations

The researcher decided not to take into account other factors that may influence students' PASS scores. All students who met the requirements of participation in the study were included. Students included in special education and/or the gifted and talented program were included in this study, which could affect PASS scores, which could affect the results of this study.

Summary

It is vital that research continues on academic redshirting and further data be collected and analyzed to determine which course of action is more beneficial to students. Decisions that are made at the beginning of a child's education can affect a student throughout the rest of his/her school years. Chapter 3 described the methods used in this study in order to make more informed decisions regarding these students. This chapter outlined the participants, instruments, and procedures that were used in this study along with the study's limitations and delimitations. Chapter 4 presents the results of the data analysis as they relate to the research questions presented in this study.

Chapter 4: Results

Introduction

The purpose of this study was to determine if there was a possible difference in scores on the PASS in reading and math between third-grade students who were academically redshirted and students who were not academically redshirted. Gender was also factored into the comparison in order to allow the researcher to determine if gender shared a relationship with these scores on the third-grade PASS. Examining the potential effects of gender on birthdate may result in a deeper analysis of the research topic. It is often difficult for parents and educators to make decisions regarding what is the best age for a child to enter kindergarten. Sometimes, parents decide to voluntarily delay entry for their child even if the child meets the state cut-off entry age, believing that delayed entry will lead to more success in school. This study looked at the data of the students who were redshirted and compared that data with the data of the students who were not redshirted in order to determine if a relationship existed. The data and findings are presented and organized by each research question.

Findings

Research Question 1. Is there a statistically significant difference in reading scores between academically redshirted students and non-academically redshirted students on the third-grade PASS? The reading scores from PASS for all academically redshirted students were compared to the reading scores for all of the non-academically redshirted students. Table 7 shows the descriptive statistics (mean and standard deviation) for these two groups of students.

Table 7

Descriptive Statistics for Reading Scores by School Entry Status

Status	N	Reading Scores		
		Mean	Std. Deviation	Std. Error Mean
Redshirted Students	41	630.88	61.800	9.652
Non-Redshirted Students	841	655.22	55.369	1.909

There were 41 redshirted students and 841 non-redshirted students. The mean reading score was higher for students who were not academically redshirted ($M=655.22$, $SD=55.369$) than students who were academically redshirted ($M=630.88$, $SD=61.800$).

The researcher compared means by using an independent-samples t test to determine if a difference existed between the means of the two groups on a continuous dependent variable (Laerd, 2013). For this study, the two groups were (1) students who were academically redshirted and (2) students who were not academically redshirted. The dependent variable was academic success based on PASS scales scores. For Research Question 1, the reading scale scores were used to determine if a difference existed between the two groups. Furthermore, the independent-samples t test also determined whether the difference between the two groups was statistically significant (Laerd, 2013).

Before running the independent-samples t test, the researcher first tested whether there was an equal variance or unequal variance among the two groups. The following hypotheses were tested:

H0: variances are equal among two groups

H1: variances are not equal among two groups

These hypotheses were tested using Levene's test for equality of variances. Using the results from Table 8, the p value is greater than the significant level 0.05 ($0.423 > 0.05$), so the null hypothesis is retained. There was homogeneity of variances for reading scores for redshirted students and non-redshirted students as assessed by Levene's test for equality of variances ($p=.423$); therefore, the independent-sample t test for equal variances was carried out. Table 8 illustrates the statistical results from the t test.

Table 8

Effect of School Entry Status on Reading Scores

Reading Scores	Levene's Test for Equality of Variances		t test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.642	.423	2.72	880	.007	24.3	8.90	6.78	41.7
Equal variances not assumed			2.47	43.2	.018	24.3	9.84	4.42	44.1

The mean difference of the non-redshirted students' reading score was 24.3, 95% CI [6.78 to 41.1] higher than the redshirted students' mean reading score. The results of the independent-samples t test indicate that there is a significant difference in reading scores for academically redshirted students and non-academically redshirted students; $t(880)=2.72$, $p=0.007$. These results suggest that academically redshirted students have lower reading scores than non-academically redshirted students.

Research Question 2. Is there a statistically significant difference in math scores between academically redshirted students and non-academically redshirted students on the third-grade PASS? The math scores from PASS for all academically redshirted students were compared to the math scores for all of the non-academically redshirted students. Table 9 shows the descriptive statistics (mean and standard deviation) for these two groups of students.

Table 9

Descriptive Statistics for Math Scores by School Entry Status

Status	Reading Scores			
	N	Mean	Std. Deviation	Std. Error Mean
Redshirted Students	41	623.59	61.855	9.660
Non-Redshirted Students	841	644.37	56.176	1.937

There were 41 redshirted students and 841 non-redshirted students. The mean math score was higher for students who were not academically redshirted ($M=644.37$, $SD=56.176$) than students who were academically redshirted ($M=623.59$, $SD=61.855$).

The researcher compared means by using an independent-samples t test to determine if a difference existed between the means of the two groups on a continuous dependent variable (Laerd, 2013). For this study, the two groups were (1) students who were academically redshirted and (2) students who were not academically redshirted. The dependent variable was academic success based on PASS scales scores. For Research Question 2, the math scale scores were used to determine if a difference existed between the two groups. Furthermore, the independent-samples t test also determined

whether the difference between the two groups was statistically significant (Laerd, 2013).

Before running the independent-samples t test, the researcher first tested whether there was an equal variance or unequal variance among the two groups. The following hypotheses were tested:

H0: variances are equal among two groups

H1: variances are not equal among two groups

These hypotheses were tested using Levene's test for equality of variances. Using the results from Table 10, the p value is greater than the significant level 0.05 ($0.337 > 0.05$), so the null hypothesis is retained. There was homogeneity of variances for math scores for redshirted students and non-redshirted students as assessed by Levene's test for equality of variances ($p=.337$); therefore, the independent-sample t test for equal variances was carried out. Table 10 illustrates the statistical results from the t test.

Table 10

Effect of School Entry Status on Math Scores

Math Scores	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.924	.337	2.302	880	.022	20.783	9.028	3.065	38.502
Equal variances not assumed			2.109	43.278	.041	20.783	9.852	.918	40.649

The mean difference of the non-redshirted students' math score was 20.783, 95% CI [3.065 to 38.502] higher than the redshirted students' mean math score. The results of

the independent-samples t test indicate that there is a significant difference in math scores for academically redshirted students and non-academically redshirted students; $t(880)=2.302, p=0.022$. These results suggest that academically redshirted students have lower math scores than non-academically redshirted students.

Research Question 3. To what extent, if any, does gender impact reading scores between academically redshirted students and non-academically redshirted students on the third-grade PASS? The reading scores from PASS for all academically redshirted males were compared to the reading scores for all of the non-academically redshirted males. Additionally, the reading scores for the academically redshirted females were compared to the reading scores of the non-academically redshirted females. Table 11 shows the descriptive statistics (mean and standard deviation) for each combination of the groups of the independent variables (gender and school entry status).

Table 11

Descriptive Statistics for Reading Scores by Gender and School Entry Status

School Entry Status	Gender	Mean	Std. Deviation	N
Redshirted Students	F	650.64	72.211	14
	M	620.63	54.306	27
	Total	630.88	61.800	41
Non-Redshirted Students	F	663.20	54.895	432
	M	646.62	54.652	409
	Total	655.14	55.369	841
Total	F	662.81	55.460	446
	M	645.01	54.928	436
	Total	654.01	55.880	882

The mean reading score for non-academically redshirted males is higher than the mean reading score for academically redshirted males, and the mean reading score for

non-academically redshirted females is higher than the mean reading score for academically redshirted females.

The researcher then used a two-way ANOVA to determine whether there was an interaction effect between two independent variables on a continuous dependent variable (Laerd, 2013). For this study, the two independent variables were gender and school entry age (between the students who were redshirted and those who were not redshirted). Once more, the dependent variable was academic success based on reading PASS scale scores. The researcher further evaluated the data to determine how the male students who were academically redshirted performed compared to their male peers who had not been academically redshirted; and the same was carried out with the data obtained for the females from each group.

Figure 1 shows the mean reading scores for each combination of groups of gender and school entry status (academically redshirted students, non-academically redshirted students). Based on the two parallel lines that do not cross each other for gender and school entry status, the graph below suggests that there is no significant interaction.

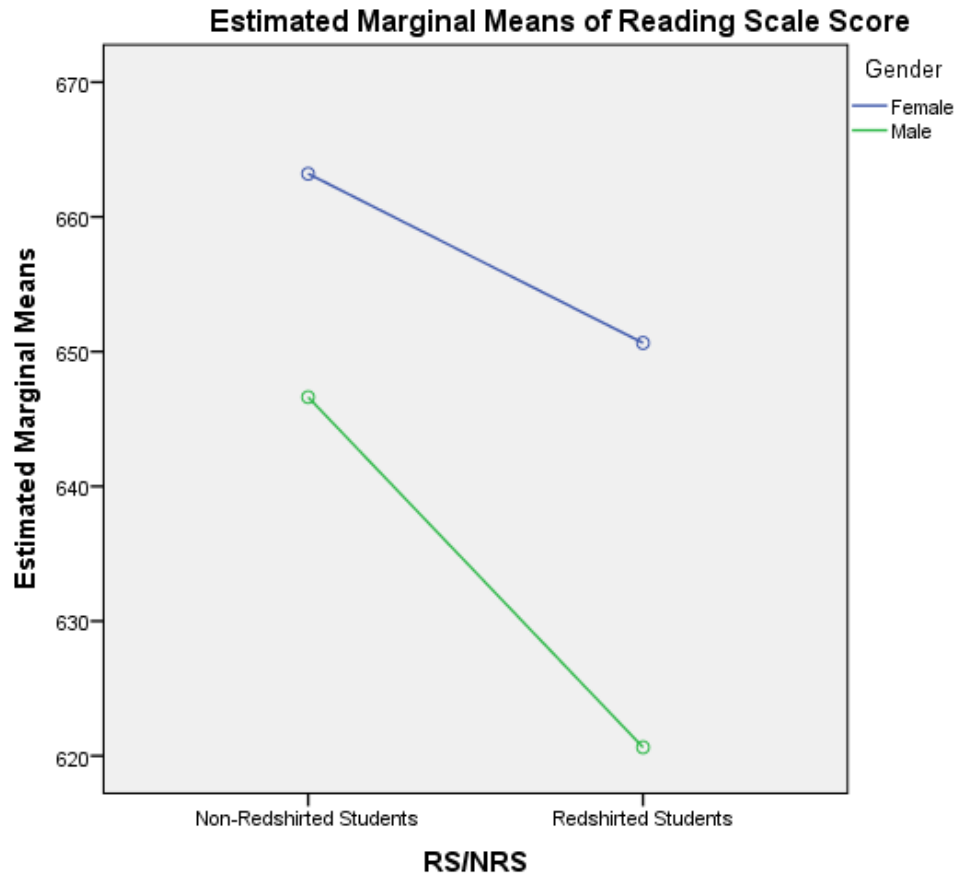


Figure 1. Reading Scale Score Means by Gender and School Entry Status.

Table 12 shows the results of the two-way ANOVA computed to determine the level of significance between school entry status, gender, and reading scale scores on PASS.

Table 12

Two-Way ANOVA for Reading Scores by Gender and School Entry Status

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	89088.043 ^a	3	29696.014	9.795	.000	.032
Intercept	58838937.156	1	58838937.156	19407.368	.000	.957
Entrance Status	13126.696	1	13126.696	4.330	.038	.005
Sex	19175.716	1	19175.716	6.325	.012	.007
Entrance Status * Sex	1593.103	1	1593.103	.525	.469	.001
Error	2661905.844	878	3031.783			
Total	380009586.000	882				
Corrected Total	2750993.887	881				

Note. a. R Squared=.032 (Adjusted R Squared=.029).

A two-way ANOVA was conducted, and the p value was greater than the significance level of .05 ($p=0.469>0.05$); therefore, there was no statistically significant interaction effect between school entry status and gender on reading scores, $F(1, 878)=0.525, p=.469$, partial $\eta^2=.001$. Since there was not a significant interaction effect, the main effects of school entry status (academically redshirted students and non-academically redshirted students) and gender (male, female) were tested.

The effect of school entry status on reading scores was significant, $F(1, 878)=4.330, p=.038$, partial $\eta^2=.005$ since the p value was less than the significance level of .05 ($p=.038<0.05$). The test also showed that the effect of gender on reading scores was significant, $F(1, 878)=6.325, p=.012$, partial $\eta^2=.007$ since the p value was less than the significance level of .05 ($p=.012<0.05$).

Research Question 4. To what extent, if any, does gender impact math scores between academically redshirted students and non-academically redshirted students on the third-grade PASS? The math scores from PASS for all academically redshirted males were compared to the math scores for all of the non-academically redshirted males. Additionally, the math scores for the academically redshirted females were compared to the math scores of the non-academically redshirted females. Table 13 shows the descriptive statistics (mean and standard deviation) for each combination of the groups of the independent variables (gender and school entry status).

Table 13

Descriptive Statistics for Math Scores by Gender and School Entry Status

School Entry Status	Gender	Mean	Std. Deviation	N
Redshirted Students	F	624.14	72.338	14
	M	623.30	57.180	27
	Total	623.59	61.855	41
Non-Redshirted Students	F	647.26	55.576	432
	M	641.31	56.711	409
	Total	644.37	56.176	841
Total	F	646.54	56.220	446
	M	640.20	56.840	436
	Total	643.40	56.584	882

The mean math score for non-academically redshirted males is higher than the mean math score for academically redshirted males, and the mean math score for non-academically redshirted females is higher than the mean math score for academically redshirted females.

The researcher then used a two-way ANOVA to determine whether there was an interaction effect between two independent variables on a continuous dependent variable (Laerd, 2013). For this study, the two independent variables were gender and school entry age (between the students who were redshirted and those who were not redshirted). Once more, the dependent variable was academic success based on math PASS scale scores. The researcher further evaluated the data to determine how the male students who were academically redshirted performed as compared to their male peers who had not been academically redshirted, and the same was carried out with the data obtained for the females from each group.

Figure 2 shows the mean math scores for each combination of groups of gender and school entry status. Based on the two parallel lines that do not cross each other for gender and school entry status, the graph below suggests that there is no significant interaction.

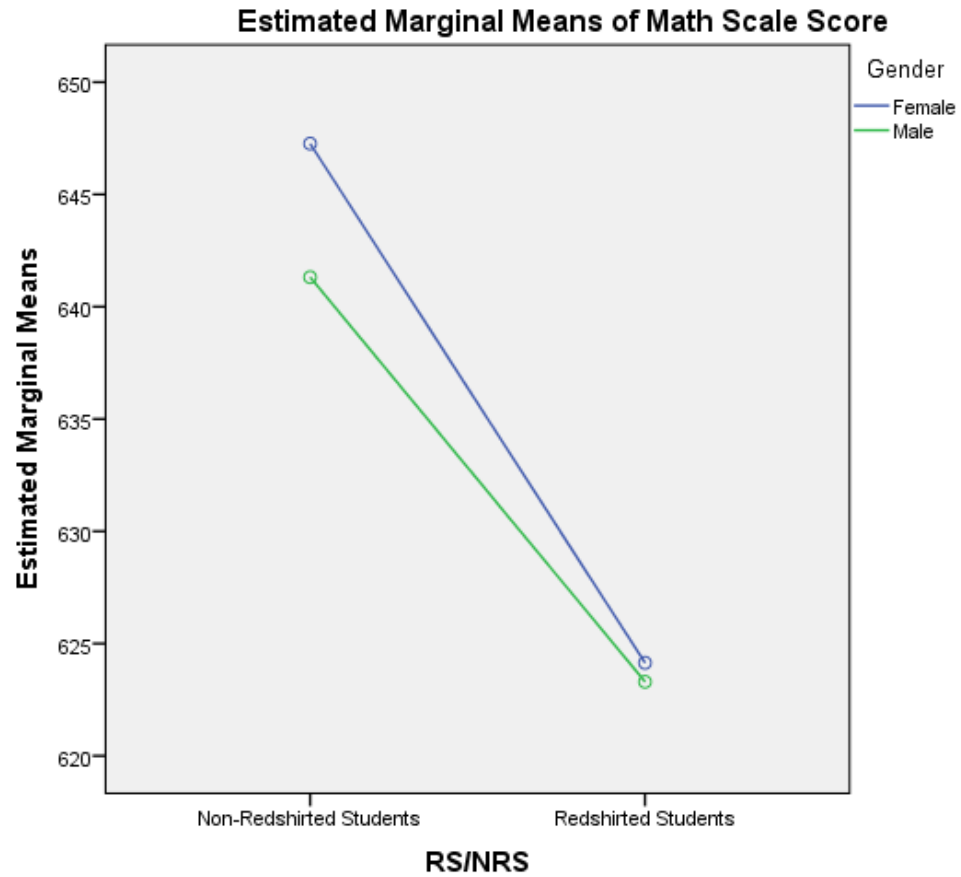


Figure 2. Math Scale Score Means by Gender and School Entry Status.

Table 14 shows the results of the two-way ANOVA computed to determine the level of significance between school entry status, gender, and math PASS scale scores.

Table 14

Two-Way ANOVA for Math Scores by Gender and School Entry Status

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	24327.387 ^a	3	8109.129	2.546	.055	.009
Intercept	56801431.37	1	56801431.37	17833.887	.000	.953
Entrance Status	14944.697	1	14944.697	4.692	.031	.005
Sex	407.810	1	407.810	.128	.721	.000
Entrance Status * Sex	229.904	1	229.904	.072	.788	.000
Error	2796454.727	878	3185.028		.055	
Total	367939473.0	882				
Corrected Total	2820782.115	881				

Note. a. R Squared=.009 (Adjusted R Squared=.005).

A two-way ANOVA was conducted, and the p value was greater than the significance level of .05 ($p=.788>0.05$); therefore, there was no statistically significant interaction effect between school entry status and gender on math scores, $F(1, 878)=0.072, p=.788$, partial $\eta^2=.000$. Since there was not a significant interaction effect, the main effects of school entry status (academically redshirted students and non-academically redshirted students) and gender (male, female) were tested. The effect of school entry status on math scores was significant, $F(1, 878)=4.692, p=.031$, partial $\eta^2=.005$ since the p value was less than the significance level of .05 ($p=.031<0.05$). The test also showed that the effect of gender on math scores was not significant, $F(1, 878)=0.128, p=.721$, partial $\eta^2=.000$ since the p value was greater than the significance level of .05 ($p=.721>0.05$).

The researcher further investigated the effects of school entry status and birth

month to determine if a student's month of birth had any effect on reading and math scale scores. The researcher used a two-way ANOVA to determine whether there was an interaction effect between school entry status and birth month on a continuous dependent variable: reading scale scores.

Figure 3 shows the mean reading scores for each combination of groups of school entry status and month of birth. The graph suggests that there is a significant interaction effect.

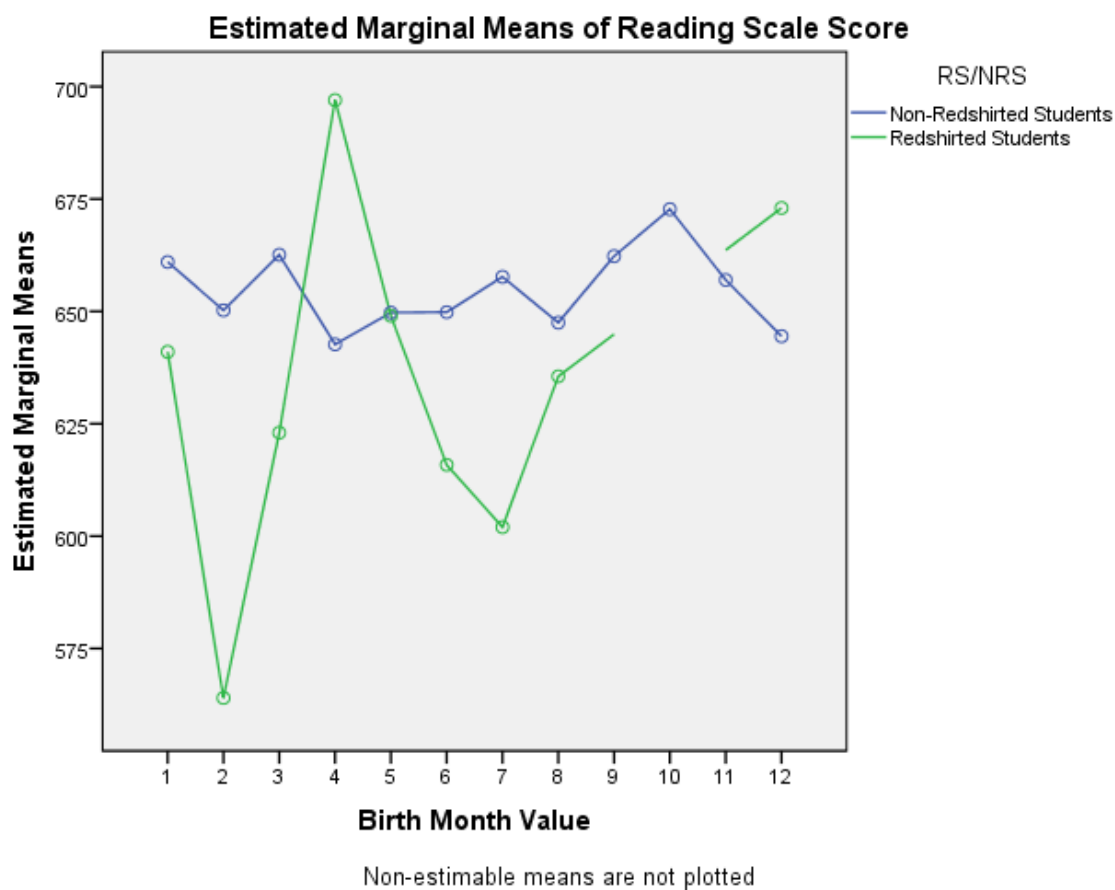


Figure 3. Reading Scale Score Means by School Entry Status and Birth Month.

Table 15 shows the results from the two-way ANOVA.

Table 15

Two-way ANOVA for Reading Scores by School Entry Status and Birth Month

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	129070.563 ^a	20	6453.528	2.119	.003	.009
Intercept	35115571.128	1	35115571.128	11531.423	.000	.953
Entrance Status	6804.950	1	6804.950	2.235	.135	.005
Birth Month Value	65125.844	11	5920.531	1.944	.031	.000
Entrance Status * Birth Month Value	49596.791	8	6199.599	2.036	.040	.000
Error	2621923.323	861	3045.207		.003	
Total	380009586.000	882				
Corrected Total	2750993.887	881				

Note. a. R Squared=.047 (Adjusted R Squared=.025).

A two-way ANOVA was conducted, and the p value was less than the significance level of .05 ($p=.040>0.05$); therefore, there was a statistically significant interaction effect between school entry status and birth month on reading scores, $F(8, 861)=2.036, p=.040$, partial $\eta^2=.000$. Since there was a significant interaction effect, the main effects were not tested.

The researcher used a two-way ANOVA to determine whether there was an interaction effect between school entry status and birth month on a continuous dependent variable: math scale scores.

Figure 4 shows the mean math scores for each combination of groups of school entry status and month of birth.

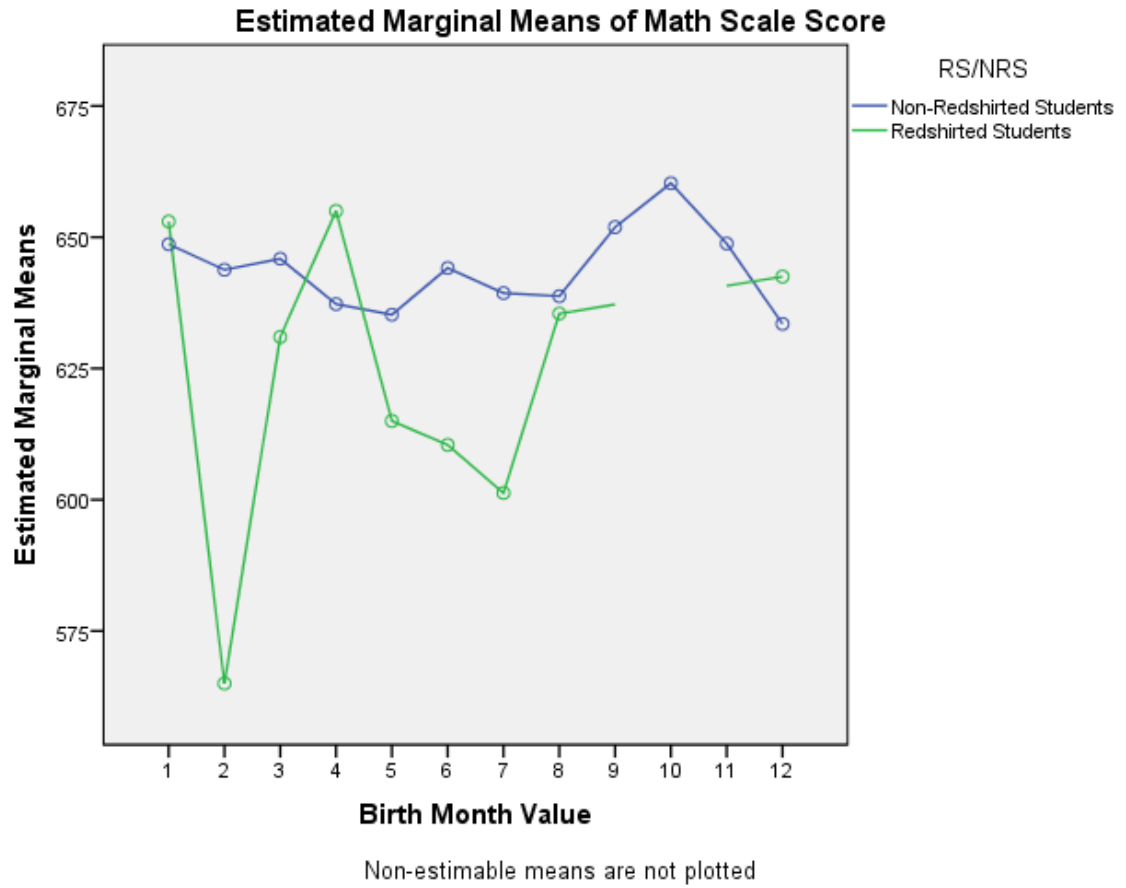


Figure 4. Math Scale Score Means by School Entry Status and Birth Month.

Table 16 shows the results from the two-way ANOVA.

Table 16

Two-way ANOVA for Math Scores by School Entry Status and Birth Month

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	85636.934 ^a	20	4281.847	1.348	.140	.030
Intercept	33983484.757	1	33983484.757	10697.706	.000	.926
Entrance Status	6214.699	1	6214.699	1.956	.162	.002
Birth Month Value	51365.440	11	4669.585	1.470	.137	.018
Entrance Status * Birth Month Value	19445.951	8	2430.744	.765	.634	.007
Error	2735145.181	861	3176.708		.140	
Total	367939473.000	882				
Corrected Total	2820782.115	881				

Note. a. R Squared=.030 (Adjusted R Squared=.008).

A two-way ANOVA was conducted, and the p value was greater than the significance level of .05 ($p=.634>0.05$); therefore, there was not a statistically significant interaction effect between school entry status and birth month on math scores, $F(8, 861)=0.765$, $p=.634$, partial $\eta^2=.007$. Since there was not a significant interaction effect, the main effects of school entry status (academically redshirted students and non-academically redshirted students) and birth month were tested. The effect of school entry status on math scores was not significant, $F(1, 861)=1.956$, $p=.162$, partial $\eta^2=.002$ since the p value was greater than the significance level of .05 ($p=.162>0.05$). The test also showed that the effect of birth month on math scores was not significant, $F(11, 861)=1.470$, $p=.137$, partial $\eta^2=.018$ since the p value was greater than the significance level of .05 ($p=.137>0.05$).

Summary

When looking at academic redshirting, the results suggest that students who were not academically redshirted scored significantly higher in reading and math on PASS than the students who were academically redshirted. In further analyzing the data, looking at the effects of gender on reading and math scores, the results show that non-academically redshirted males and females scored significantly higher in reading on PASS, but there was no statistically significant interaction effect between school entry status and gender on PASS reading scores. Additionally, non-academically redshirted males and females scored higher in math on PASS, but there was no statistically significant interaction effect between school entry status and gender on PASS math scores. Finally, when analyzing the effects of school entry status and birth month on reading and math scores, the results show that there was a statistically significant interaction effect between school entry status and birth month in reading but not in math on PASS.

Chapter 5: Discussion

Introduction

The literature regarding the optimal age of kindergarten entrance is ambiguous (DeMeis & Stearns, 1992). Some researchers suggest that students who enter kindergarten at a younger age may be at a disadvantage (Ede, 2004; Grimes, n.d.; Zill et al., 1997), while other research shows that there is no significant academic difference between younger students and their older peers (Ede, 2004; Shepard & Smith, 1986). Parents, teachers, and administrators are often torn and are unable to make that difficult decision: Should a child begin school when he or she is age appropriate and risk overplacement, or should they delay entrance into kindergarten and start the child a year later? The purpose of this study was to determine if there was a possible difference in PASS scores in reading and math between third-grade students who were academically redshirted and students who were not academically redshirted. Gender was also factored into the comparison in order to allow the researcher to determine if gender shared a relationship with these scores on the third-grade PASS. It is often difficult for parents and educators to make decisions regarding what is the best age for a child to enter kindergarten. This study looked at the data of the students who were redshirted and compared that data with the data of the students who were not redshirted in order to determine if a relationship existed. The implications of findings are organized by research question.

Implications of Findings

Research Question 1. Is there a statistically significant difference in reading scores between academically redshirted students and non-academically redshirted students on the third-grade PASS? This section of the research sought to compare the

mean reading PASS scale scores for students who were academically redshirted to those students who were not academically redshirted to see if there was an advantage to redshirting students and delaying their entrance into kindergarten by 1 year. Results from previous studies have yielded conflicting results. Crosser (1991) examined associations between age at school entry in kindergarten and academic performance through sixth grade. Crosser found that males with summer birthdates tended to be advantaged academically by postponing kindergarten entrance by 1 year. Teltsch and Breznitz (1988) found similar results. Their results indicated that differences of several months can have a significant effect on academic achievement and school adjustment. On the other hand, Graue and Diperna (2000) found that age had no statistically significant effect on student achievement even in the early grades, and they noted that children who delayed their entrance into school by a year or more were likely to receive special education services. The results from this study showed that there was a significant difference in reading scores between students who were redshirted and students who were not; however, they showed that the redshirted students actually scored significantly lower in reading than the non-academically redshirted students. As shown in Table 7, the mean reading score of academically redshirted students was 630.88, and the mean reading score of the non-academically redshirted students was 655.22. Based on the independent samples *t* test that was run, with a 95% confidence interval, there was a statistically significant difference in reading scores between redshirted and non-redshirted students as shown in Table 8. The results from this study indicate that non-academically redshirted students outperform their redshirted peers in reading.

Research Question 2. Is there a statistically significant difference in math scores between academically redshirted students and non-academically redshirted

students on the third-grade PASS? This section of the research sought to compare the mean math scale scores on PASS for students who were academically redshirted to those students who were not academically redshirted to see if there was an advantage to redshirting students and delaying their entrance into kindergarten by 1 year.

Data from previous research has shown to support a relationship between a child's age and proficiency in early math skills. Sixty-six percent of kindergartners who were six or about to be six were able to read numbers, count past 10, recognize patterns, and compare relative lengths of objects. Only 42% of their 5-year-old counterparts could do those same skills (Ede, 2004). According to this data, older students are shown to have an advantage in mathematics skills. The results from this study did not yield the same results.

The results from this study showed that there was a significant difference in math scores between students who were redshirted and students who were not; however, the scores showed that the redshirted students actually scored significantly lower in math than the non-academically redshirted students. As shown in Table 9, the mean math score of academically redshirted students was 623.59, and the mean math score of the non-academically redshirted students was 644.37. Based on the independent samples *t* test that was run, with a 95% confidence interval, there was a statistically significant difference in math scores between redshirted and non-redshirted students as shown in Table 10. The results from this study indicate that non-academically redshirted students outperform their redshirted peers in math.

Research Question 3. To what extent, if any, does gender impact reading scores between academically redshirted students and non-academically redshirted students on the third-grade PASS? This section of the research sought to determine if

gender affected reading scores between academically redshirted students and non-academically redshirted students. Gender becomes an issue when trying to decide whether or not to delay entry into kindergarten. Looking at student gender as a variable that affects readiness for school and student success dates back to the early 1970s where researchers like Rubin (1972) paired longitudinal studies of more than 900 kindergarten through second-grade students' school readiness and academic performance with numerous individual testimonials from kindergarten and first-grade teachers to determine whether or not gender differences were present at the start of school and whether or not they can affect student success. Rubin's studies found an extensive amount of research supporting the notion that "girls tend to enter school with greater readiness for school learning activities than boys of the same age" and "girls were ahead of boys particularly from the age of five to the age of six" (p. 265). According to Eliot (2010), over the last 40 years, girls have consistently outperformed boys in reading and writing on the NAEP. NAEP (2000) found that boys are typically one and one-half years behind girls in these subjects (Gurian & Stevens, 2004). In Narahara's (1998) research of gender and academic performance, she compared reading and math scores of boys and girls in second grade. Narahara found that female students surpassed male students in both areas. The female average for reading achievement was 53, compared to the male average of only 35. DeMeis and Stearns (1992) suggested that gender may be a more important factor to consider than age when determining when a child should begin school.

In this study, males were not compared to females. Redshirted males were compared to the non-redshirted males, and redshirted females were compared to non-redshirted females; however, with all of the literature and research previously carried out on gender, the researcher believed that it was important to factor in the effects of gender

with school entry status to see if it had any effect on reading scores. As shown in Table 11, the mean reading score of academically redshirted males was 620.63, and the mean reading score of the non-academically redshirted males was 646.62. The mean reading score of academically redshirted females was 650.64, and the mean reading score of the non-academically redshirted females was 663.20. As Table 12 shows, school entry status had a statistically significant effect on reading scores, and gender had a statistically significant effect on reading scores; however, there was no interaction effect between both variables (school entry status and gender) on reading scores. The results from this study suggest that students who are not redshirted will score significantly higher in reading on PASS. Furthermore, the results from this study indicate that females score significantly higher in reading on PASS than their male peers. This supports much of the research previously discussed in Chapter 2 regarding gender differences in education.

Research Question 4. To what extent, if any, does gender impact math scores between academically redshirted students and non-academically redshirted students on the third-grade PASS? This section of the research sought to determine if gender affected math scores between academically redshirted students and non-academically redshirted students. Gender differences have been shown to be connected to academic success. Much of the reviewed literature mentions the fact that this variable can make a difference in achievement in school (Crosser, 1991; Ede, 2004; Grimes, n.d.; Narahara, 1998; Zill et al., 1997). In Narahara's (1998) research of gender and academic performance, she compared reading and math scores of boys and girls in second grade. The average math achievement score for females was 38 and it was 25 for males. The differences in average scores between the two genders showed a greater difference in achievement in reading than in math, while female students outperformed the male

students in both areas.

Again, in this study, males were not compared to females. Redshirted males were compared to non-redshirted males, and redshirted females were compared to non-redshirted females; however, with all of the literature and research previously carried out on gender, the researcher believed that it was important to factor in the effects of gender with school entry status to see if it had any effect on math scores. As shown in Table 13, the mean math score of academically redshirted males was 623.30, and the mean math score of the non-academically redshirted males was 641.31. The mean math score of academically redshirted females was 624.14, and the mean math score of the non-academically redshirted females was 647.26. As Table 14 shows, school entry status had a statistically significant effect on math scores, but gender did not have a statistically significant effect on math scores. Furthermore, there was no interaction effect between both variables (school entry status and gender) on math scores. The results from this study suggest that students who are not redshirted will score significantly higher in math on PASS.

The researcher further investigated the effects of school entry status and birth month to determine if a student's month of birth had any effect on reading and math scale scores. As shown from the information in Table 15, there was a statistically significant interaction effect between school entry status and birth month on reading scores. The results from this study suggest that parents, teachers, and administrators could possibly take a student's month of birth into consideration when trying to determine whether or not a student should be academically redshirted, especially if they are concerned about the child's reading and/or literacy development.

As shown from the information in Table 16, there was not a statistically

significant interaction effect between school entry status and birth month on math scores. Furthermore, school entry status did not have a significant effect on math scores, as well as birth month. The results of this study suggest that a student's month of birth will not have an effect on math scores.

Recommendations

The data from this study showed that non-academically redshirted students scored significantly higher in reading and math than students who were academically redshirted. While this study may have yielded these results for the school district that was included in the study, it may not be true for other districts. By including only one school district in this study, the sample size was small, especially the number of redshirted students. It is recommended that this study be replicated with a larger sample size so it could include a larger number of redshirted students. A larger sample size could result in different findings from this study. A larger sample size could also allow for more extensive research to be conducted, especially in the area of school entry status and birth month. Since this study showed a significant effect on school entry status and birth month, a larger sample size could help to determine if a student born in a certain month would benefit more from being redshirted than other students born in different months. This study did not have an ample sample size to complete such testing.

This study only used data from one assessment, the South Carolina PASS. It is recommended that this study be replicated using other assessment data such as the most current state standardized test scores, scores from the Developmental Reading Assessment (or other school/district reading assessment), and scores from the Measures of Academic Progress (MAP) test. Including scores from various assessments could help strengthen the results of the study.

This study used data from students who had taken PASS in third grade. It is recommended that this study be replicated using data from secondary education to investigate the long-term effects of school entry status (academic redshirting vs. non-academic redshirting). Data could even be gathered on students after high school. This study could look further in the future and include college and career data from the redshirted and non-redshirted students to determine if one group had more of an advantage or disadvantage over the other group later on in their adult life.

Lastly, the researcher in this study decided not to take into account other factors that may influence students' PASS scores. All students who met the requirements of participation in the study were included. Students included in special education and/or the gifted and talented program were included in this study, which could affect PASS scores, which could affect the results of this study. It is recommended that future studies take these special circumstances into account. If gifted and talented students and students in special education were excluded from this study, the number of outliers could possibly be reduced, which could cause the results to be more reliable.

Final Conclusions

The purpose of this study was to determine if there was a possible difference in PASS scores in reading and math between third-grade students who were academically redshirted and students who were not academically redshirted. Gender was also factored into the comparison in order to allow the researcher to determine if gender shared a relationship with these scores on the third-grade PASS. There are several conclusions that can be made based on this research.

First, non-academically redshirted students score significantly higher in reading and math than the academically redshirted students. Many previous studies yielded

various results, but the results from this study support the idea that redshirting does not give a student an advantage over other students who are not academically redshirted.

Second, females score significantly higher in reading than males. As discussed in Chapter 2, there are numerous studies on gender differences in education. Many researchers found that females outperform males in the earlier years, especially in reading and literacy (Crosser, 1991; Ede, 2004; Grimes, n.d.; Narahara, 1998; Zill et al., 1997). The results from this study support the claim of females outperforming males in reading.

Third, non-redshirted males do not score significantly higher than redshirted males in reading and in math. Additionally, non-redshirted females do not score significantly higher than redshirted females in reading and in math. While non-redshirted males have higher mean scores in reading and math than redshirted males and non-redshirted females have higher mean scores in reading and math than redshirted females, the difference is not statistically significant. Non-redshirted students scored significantly higher than redshirted students; but when gender is factored in, there is not a statistically significant difference.

Finally, school entry status (academically redshirted students vs. non-academically redshirted students) and birth month have a significant effect on reading scores; however, school entry status and birth month do not have a significant effect on math scores.

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Appendix A

Assistant Superintendent Approval Letter

[REDACTED]

March 31, 2015

To Whom It May Concern:

Christin Smith has my permission to use data from Spartanburg County School District Four in a doctoral study at Gardner-Webb University concerning the Effects of Academic Redshirting on Students with Summer Birthdays.

If you have any questions, I may be reached at [REDACTED] or [REDACTED]

Sincerely,

[REDACTED]
[REDACTED]
[REDACTED]

Appendix B

PASS Data for Redshirted Students

			PASS 2009: ELA			PASS 2009: Math		
ID	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1RS09	M	2/12/1999	3	564	NM	3	565	NM
2RS09	F	7/7/1999	3	668	E	3	690	W
3RS09	M	8/28/1999	3	585	NM	3	622	M
4RS09	M	8/27/1999	3	591	NM	3	569	NM
5RS09	M	8/11/1999	3	702	E	3	665	E

			PASS 2010: ELA			PASS 2010: Math		
ID	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1RS10	M	12/1/1999	3	691	E	3	643	E
2RS10	F	5/21/2000	3	649	E	3	615	M
3RS10	M	6/26/2000	3	675	E	3	661	E
4RS10	M	8/26/2000	3	589	NM	3	628	M
5RS10	M	6/25/2000	3	589	NM	3	519	NM
6RS10	M	6/20/2000	3	569	NM	3	602	M
7RS10	F	8/3/2000	3	631	M	3	602	M

			PASS 2011: ELA			PASS 2011: Math		
ID	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1RS11	M	1/24/2001	3	664	E	3	725	E
2RS11	M	4/8/2001	3	638	M	3	618	M
3RS11	M	8/11/2001	3	632	M	3	637	M
4RS11	F	6/28/2001	3	571	NM	3	564	NM
5RS11	M	7/27/2001	3	564	NM	3	665	E
6RS11	M	6/24/2001	3	679	E	3	653	E
7RS11	M	8/25/2001	3	664	E	3	672	E

ID			PASS 2012: ELA			PASS 2012: Math		
	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1RS12	F	3/1/2002	3	626	M	3	615	M
2RS12	F	8/15/2002	3	718	E	3	692	E
3RS12	F	7/21/2002	3	705	E	3	692	E
4RS12	F	7/21/2002	3	620	M	3	527	NM
5RS12	F	7/10/2002	3	560	NM	3	522	NM

ID			PASS 2013: ELA			PASS 2013: Math		
	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1RS13	M	12/19/2002	3	655	E	3	642	E
2RS13	M	1/3/2003	3	675	E	3	689	E
3RS13	F	3/16/2003	3	620	M	3	647	E
4RS13	F	4/28/2003	3	668	E	3	576	NM
5RS13	M	7/15/2003	3	637	M	3	627	M
6RS13	M	8/4/2003	3	608	M	3	632	M

ID			PASS 2014: ELA			PASS 2014: Math		
	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1RS14	F	1/17/2004	3	584	NM	3	545	NM
2RS14	M	4/5/2004	3	578	NM	3	563	NM
3RS14	M	4/20/2004	3	756	E	3	774	E
4RS14	F	4/22/2004	3	845	E	3	744	E
5RS14	M	7/1/2004	3	596	NM	3	579	NM
6RS14	M	6/20/2004	3	584	NM	3	567	NM
7RS14	M	7/23/2004	3	608	M	3	604	M
8RS14	M	7/23/2004	3	549	NM	3	529	NM
9RS14	M	7/4/2004	3	584	NM	3	604	M
10RS14	F	6/29/2004	3	644	E	3	707	E
11RS14	M	7/15/2004	3	531	NM	3	575	NM

Appendix C

PASS Data for Non-redshirted Students

			PASS 2009: ELA			PASS 2009: Math		
ID	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1NRS09	F	9/3/1999	3	675	E	3	673	E
2NRS09	M	9/3/1999	3	610	M	3	595	NM
3NRS09	M	9/7/1999	3	712	E	3	653	E
4NRS09	F	9/9/1999	3	661	E	3	632	E
5NRS09	M	9/12/1999	3	641	M	3	622	M
6NRS09	F	9/13/1999	3	622	M	3	569	NM
7NRS09	F	9/16/1999	3	591	NM	3	591	NM
8NRS09	M	9/17/1999	3	610	M	3	632	M
9NRS09	M	9/29/1999	3	547	NM	3	569	NM
10NRS09	F	9/30/1999	3	712	E	3	681	E
11NRS09	M	10/1/1999	3	675	E	3	690	E
12NRS09	F	10/2/1999	3	564	NM	3	547	NM
13NRS09	F	10/8/1999	3	683	E	3	641	M
14NRS09	F	10/8/1999	3	578	NM	3	637	M
15NRS09	F	10/11/1999	3	761	E	3	690	E
16NRS09	M	10/14/1999	3	661	E	3	673	E
17NRS09	F	10/15/1999	3	654	E	3	632	M
18NRS09	M	10/15/1999	3	641	M	3	622	M
19NRS09	M	10/17/1999	3	675	E	3	627	M
20NRS09	F	10/21/1999	3	571	NM	3	542	NM
21NRS09	M	10/22/1999	3	668	E	3	653	E
22NRS09	F	10/22/1999	3	692	E	3	712	E
23NRS09	M	10/24/1999	3	647	E	3	659	E
24NRS09	F	10/24/1999	3	702	E	3	641	M
25NRS09	F	10/25/1999	3	647	E	3	613	M
26NRS09	F	10/26/1999	3	725	E	3	647	E
27NRS09	M	10/28/1999	3	610	M	3	578	NM
28NRS09	M	10/30/1999	3	741	E	3	690	E
29NRS09	M	11/2/1999	3	654	E	3	632	M
30NRS09	F	11/5/1999	3	647	E	3	595	NM
31NRS09	M	11/5/1999	3	683	E	3	659	E
32NRS09	M	11/5/1999	3	661	E	3	653	E
33NRS09	F	11/7/1999	3	675	E	3	665	E
34NRS09	M	11/14/1999	3	683	E	3	659	E
35NRS09	F	11/18/1999	3	654	E	3	665	E
36NRS09	F	11/22/1999	3	564	NM	3	604	M
37NRS09	F	11/24/1999	3	712	E	3	727	E
38NRS09	F	11/29/1999	3	654	E	3	673	E

39NRS09	M	12/1/1999	3	654	E	3	641	M
40NRS09	M	12/2/1999	3	610	M	3	632	M
41NRS09	M	12/2/1999	3	585	NM	3	591	NM
42NRS09	F	12/3/1999	3	635	M	3	641	M
43NRS09	M	12/4/1999	3	683	E	3	641	M
44NRS09	M	12/6/1999	3	622	M	3	574	NM
45NRS09	F	12/8/1999	3	654	E	3	665	E
46NRS09	M	12/12/1999	3	668	E	3	673	E
47NRS09	F	12/13/1999	3	702	E	3	632	M
48NRS09	M	12/16/1999	3	556	NM	3	542	NM
49NRS09	M	12/16/1999	3	622	M	3	622	M
50NRS09	M	12/16/1999	3	556	NM	3	608	M
51NRS09	F	12/16/1999	3	661	E	3	637	M
52NRS09	F	12/31/1999	3	692	E	3	653	E
53NRS09	F	1/3/2000	3	692	E	3	681	E
54NRS09	M	1/3/2000	3	622	M	3	608	M
55NRS09	F	1/3/2000	3	622	M	3	547	NM
56NRS09	F	1/6/2000	3	598	NM	3	641	M
57NRS09	M	1/7/2000	3	591	NM	3	632	M
58NRS09	M	1/12/2000	3	622	M	3	587	NM
59NRS09	F	1/12/2000	3	628	M	3	647	E
60NRS09	F	1/15/2000	3	628	M	3	622	M
61NRS09	F	1/25/2000	3	538	NM	3	547	NM
62NRS09	F	1/25/2000	3	654	E	3	617	M
63NRS09	F	1/27/2000	3	571	NM	3	561	NM
64NRS09	M	1/28/2000	3	668	E	3	665	E
65NRS09	F	1/28/2000	3	654	E	3	627	M
66NRS09	F	1/29/2000	3	702	E	3	681	E
67NRS09	F	2/5/2000	3	647	E	3	591	NM
68NRS09	F	2/10/2000	3	610	M	3	604	M
69NRS09	F	2/10/2000	3	654	E	3	641	M
70NRS09	M	2/10/2000	3	661	E	3	627	M
71NRS09	M	2/14/2000	3	654	E	3	627	M
72NRS09	M	2/21/2000	3	725	E	3	673	E
73NRS09	M	2/24/2000	3	604	M	3	613	M
74NRS09	M	2/27/2000	3	683	E	3	673	E
75NRS09	M	2/27/2000	3	675	E	3	627	M
76NRS09	M	3/1/2000	3	647	E	3	690	E
77NRS09	F	3/8/2000	3	628	M	3	622	M
78NRS09	F	3/11/2000	3	616	M	3	587	NM
79NRS09	M	3/11/2000	3	725	E	3	727	E

80NRS09	M	3/16/2000	3	692	E	3	659	E
81NRS09	M	3/17/2000	3	675	E	3	690	E
82NRS09	F	3/17/2000	3	725	E	3	700	E
83NRS09	F	3/18/2000	3	741	E	3	637	M
84NRS09	M	3/20/2000	3	635	M	3	561	NM
85NRS09	F	3/26/2000	3	591	NM	3	578	NM
86NRS09	F	3/27/2000	3	628	M	3	641	M
87NRS09	F	3/28/2000	3	661	E	3	647	E
88NRS09	M	3/31/2000	3	616	M	3	613	M
89NRS09	M	4/4/2000	3	668	E	3	641	M
90NRS09	M	4/4/2000	3	585	NM	3	574	NM
91NRS09	M	4/11/2000	3	604	M	3	613	M
92NRS09	F	4/19/2000	3	761	E	3	681	E
93NRS09	M	4/21/2000	3	628	M	3	587	NM
94NRS09	M	4/23/2000	3	578	NM	3	617	M
95NRS09	F	4/25/2000	3	628	M	3	617	M
96NRS09	F	5/5/2000	3	622	M	3	627	M
97NRS09	F	5/11/2000	3	725	E	3	700	E
98NRS09	M	5/12/2000	3	641	M	3	659	E
99NRS09	F	5/13/2000	3	604	M	3	582	NM
100NRS09	F	5/14/2000	3	647	E	3	665	E
101NRS09	F	5/16/2000	3	702	E	3	641	M
102NRS09	M	5/19/2000	3	598	NM	3	574	NM
103NRS09	M	5/22/2000	3	591	NM	3	531	NM
104NRS09	F	5/25/2000	3	647	E	3	653	E
105NRS09	F	5/28/2000	3	654	E	3	641	M
106NRS09	M	5/31/2000	3	641	M	3	582	NM
107NRS09	F	6/5/2000	3	675	E	3	673	E
108NRS09	F	6/5/2000	3	635	M	3	608	M
109NRS09	M	6/12/2000	3	641	M	3	653	E
110NRS09	F	6/15/2000	3	628	M	3	637	M
111NRS09	F	6/22/2000	3	668	E	3	622	M
112NRS09	F	6/24/2000	3	585	NM	3	595	NM
113NRS09	F	6/29/2000	3	641	M	3	637	M
114NRS09	M	6/30/2000	3	668	E	3	690	E
115NRS09	M	7/5/2000	3	616	M	3	647	E
116NRS09	F	7/6/2000	3	654	E	3	600	M
117NRS09	M	7/7/2000	3	571	NM	3	595	NM
118NRS09	M	7/10/2000	3	661	E	3	665	E
119NRS09	F	7/10/2000	3	628	M	3	608	M
120NRS09	M	7/11/2000	3	641	M	3	617	M

121NRS09	M	7/12/2000	3	622	M	3	604	M
122NRS09	M	7/12/2000	3	661	E	3	647	E
123NRS09	M	7/14/2000	3	564	NM	3	578	NM
124NRS09	F	7/17/2000	3	654	E	3	641	M
125NRS09	M	7/17/2000	3	668	E	3	627	M
126NRS09	M	7/17/2000	3	591	NM	3	551	NM
127NRS09	F	7/22/2000	3	585	NM	3	600	M
128NRS09	F	7/26/2000	3	635	M	3	600	M
129NRS09	M	7/31/2000	3	647	E	3	622	M
130NRS09	F	8/1/2000	3	628	M	3	665	E
131NRS09	M	8/9/2000	3	635	M	3	659	E
132NRS09	F	8/19/2000	3	571	NM	3	600	M
133NRS09	M	8/26/2000	3	591	NM	3	617	M
134NRS09	M	8/26/2000	3	556	NM	3	556	NM
135NRS09	M	8/30/2000	3	591	NM	3	578	NM
136NRS09	F	8/31/2000	3	702	E	3	673	E

			PASS 2010: ELA			PASS 2010: Math		
ID	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1NRS10	F	9/4/2000	3	668	E	3	628	M
2NRS10	M	9/6/2000	3	643	E	3	655	E
3NRS10	F	9/6/2000	3	637	M	3	655	E
4NRS10	M	9/7/2000	3	691	E	3	638	M
5NRS10	M	9/12/2000	3	602	M	3	555	NM
6NRS10	M	9/17/2000	3	583	NM	3	610	M
7NRS10	F	9/18/2000	3	655	E	3	624	M
8NRS10	F	9/23/2000	3	709	E	3	667	E
9NRS10	F	9/26/2000	3	683	E	3	655	E
10NRS10	F	9/28/2000	3	576	NM	3	541	NM
11NRS10	F	10/4/2000	3	668	E	3	610	M
12NRS10	F	10/4/2000	3	631	M	3	572	NM
13NRS10	M	10/4/2000	3	561	NM	3	581	NM
14NRS10	F	10/7/2000	3	589	NM	3	593	NM
15NRS10	M	10/8/2000	3	561	NM	3	546	NM
16NRS10	F	10/9/2000	3	699	E	3	712	E
17NRS10	F	10/10/2000	3	691	E	3	674	E
18NRS10	M	10/13/2000	3	709	E	3	667	E
19NRS10	M	10/16/2000	3	699	E	3	661	E
20NRS10	F	10/21/2000	3	747	E	3	628	M
21NRS10	F	10/24/2000	3	802	E	3	682	E
22NRS10	M	10/26/2000	3	569	NM	3	546	NM
23NRS10	F	10/28/2000	3	709	E	3	655	E
24NRS10	M	10/29/2000	3	662	E	3	619	M
25NRS10	F	10/31/2000	3	655	E	3	619	M
26NRS10	F	11/7/2000	3	655	E	3	655	E
27NRS10	F	11/7/2000	3	662	E	3	633	M
28NRS10	F	11/7/2000	3	655	E	3	643	E
29NRS10	F	11/8/2000	3	625	M	3	606	M
30NRS10	F	11/13/2000	3	719	E	3	712	E
31NRS10	F	11/14/2000	3	719	E	3	649	E
32NRS10	M	11/22/2000	3	719	E	3	747	E
33NRS10	M	11/24/2000	3	596	NM	3	655	E
34NRS10	M	11/28/2000	3	596	NM	3	624	M
35NRS10	M	11/30/2000	3	732	E	3	661	E
36NRS10	F	12/1/2000	3	576	NM	3	597	NM
37NRS10	M	12/1/2000	3	637	M	3	633	M
38NRS10	M	12/3/2000	3	583	NM	3	624	M

39NRS10	F	12/4/2000	3	732	E	3	747	E
40NRS10	M	12/5/2000	3	637	M	3	633	M
41NRS10	M	12/5/2000	3	662	E	3	649	E
42NRS10	F	12/6/2000	3	719	E	3	691	E
43NRS10	M	12/9/2000	3	583	NM	3	541	NM
44NRS10	F	12/14/2000	3	631	M	3	619	M
45NRS10	F	12/17/2000	3	649	E	3	619	M
46NRS10	F	12/17/2000	3	691	E	3	701	E
47NRS10	F	12/18/2000	3	576	NM	3	606	M
48NRS10	F	12/19/2000	3	637	M	3	572	NM
49NRS10	F	12/20/2000	3	675	E	3	674	E
50NRS10	M	12/22/2000	3	620	M	3	615	M
51NRS10	M	12/26/2000	3	709	E	3	638	M
52NRS10	F	12/27/2000	3	675	E	3	649	E
53NRS10	F	12/28/2000	3	637	M	3	649	E
54NRS10	F	1/2/2001	3	596	NM	3	619	M
55NRS10	F	1/6/2001	3	602	M	3	597	NM
56NRS10	F	1/8/2001	3	668	E	3	615	M
57NRS10	M	1/18/2001	3	662	E	3	624	M
58NRS10	F	1/25/2001	3	683	E	3	655	E
59NRS10	M	1/27/2001	3	576	NM	3	519	NM
60NRS10	M	1/29/2001	3	596	NM	3	559	NM
61NRS10	M	1/31/2001	3	662	E	3	628	M
62NRS10	M	2/2/2001	3	719	E	3	712	E
63NRS10	F	2/5/2001	3	699	E	3	643	E
64NRS10	M	2/23/2001	3	620	M	3	655	E
65NRS10	F	2/24/2001	3	643	E	3	585	NM
66NRS10	F	2/25/2001	3	675	E	3	667	E
67NRS10	M	2/25/2001	3	637	M	3	643	E
68NRS10	M	3/12/2001	3	589	NM	3	633	M
69NRS10	M	3/12/2001	3	649	E	3	682	E
70NRS10	M	3/16/2001	3	643	E	3	655	E
71NRS10	M	3/16/2001	3	683	E	3	682	E
72NRS10	M	3/22/2001	3	675	E	3	701	E
73NRS10	F	3/24/2001	3	608	M	3	615	M
74NRS10	M	3/29/2001	3	602	M	3	655	E
75NRS10	F	3/31/2001	3	576	NM	3	602	M
76NRS10	M	4/6/2001	3	747	E	3	667	E
77NRS10	F	4/11/2001	3	699	E	3	691	E
78NRS10	M	4/12/2001	3	683	E	3	619	M
79NRS10	F	4/12/2001	3	589	NM	3	610	M

80NRS10	M	4/13/2001	3	602	M	3	638	M
81NRS10	F	4/13/2001	3	637	M	3	628	M
82NRS10	F	4/13/2001	3	620	M	3	577	NM
83NRS10	F	4/14/2001	3	596	NM	3	593	NM
84NRS10	M	4/18/2001	3	768	E	3	727	E
85NRS10	M	4/19/2001	3	625	M	3	674	E
86NRS10	M	4/20/2001	3	662	E	3	655	E
87NRS10	M	4/26/2001	3	643	E	3	633	M
88NRS10	M	4/27/2001	3	589	NM	3	585	NM
89NRS10	M	4/29/2001	3	699	E	3	643	E
90NRS10	F	5/2/2001	3	608	M	3	606	M
91NRS10	F	5/9/2001	3	699	E	3	667	E
92NRS10	M	5/11/2001	3	620	M	3	628	M
93NRS10	F	5/14/2001	3	649	E	3	661	E
94NRS10	M	5/16/2001	3	643	E	3	624	M
95NRS10	M	5/22/2001	3	655	E	3	619	M
96NRS10	F	5/23/2001	3	699	E	3	712	E
97NRS10	M	5/23/2001	3	683	E	3	649	E
98NRS10	F	5/25/2001	3	662	E	3	655	E
99NRS10	F	5/29/2001	3	649	E	3	606	M
100NRS10	M	5/30/2001	3	631	M	3	643	E
101NRS10	F	5/30/2001	3	732	E	3	701	E
102NRS10	M	5/31/2001	3	608	M	3	572	NM
103NRS10	M	6/5/2001	3	643	E	3	638	M
104NRS10	M	6/6/2001	3	683	E	3	655	E
105NRS10	M	6/11/2001	3	649	E	3	643	E
106NRS10	M	6/15/2001	3	675	E	3	610	M
107NRS10	M	6/15/2001	3	675	E	3	661	E
108NRS10	M	6/25/2001	3	614	M	3	643	E
109NRS10	M	6/30/2001	3	747	E	3	727	E
110NRS10	F	7/2/2001	3	675	E	3	661	E
111NRS10	M	7/2/2001	3	602	M	3	589	NM
112NRS10	M	7/8/2001	3	543	NM	3	615	M
113NRS10	F	7/12/2001	3	608	M	3	568	NM
114NRS10	F	8/2/2001	3	668	E	3	649	E
115NRS10	F	8/3/2001	3	662	E	3	649	E
116NRS10	M	8/5/2001	3	589	NM	3	602	M
117NRS10	F	8/6/2001	3	620	M	3	606	M
118NRS10	M	8/8/2001	3	637	M	3	691	E
119NRS10	F	8/11/2001	3	662	E	3	585	NM
120NRS10	M	8/13/2001	3	649	E	3	606	M

121NRS10	M	8/16/2001	3	589	NM	3	589	NM
122NRS10	F	8/19/2001	3	719	E	3	682	E
123NRS10	M	8/21/2001	3	649	E	3	643	E
124NRS10	M	8/21/2001	3	553	NM	3	549	NM
125NRS10	M	8/21/2001	3	691	E	3	661	E
126NRS10	M	8/21/2001	3	668	E	3	633	M
127NRS10	F	8/24/2001	3	637	M	3	674	E
128NRS10	M	8/26/2001	3	643	E	3	593	NM
129NRS10	F	8/31/2001	3	668	E	3	649	E

ID	Gender	Birthday	PASS 2011: ELA			PASS 2011: Math		
			Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1NRS11	F	9/5/2001	3	638	M	3	580	NM
2NRS11	F	9/9/2001	3	632	M	3	623	M
3NRS11	F	9/11/2001	3	644	E	3	637	M
4NRS11	F	9/18/2001	3	564	NM	3	541	NM
5NRS11	M	9/21/2001	3	657	E	3	637	M
6NRS11	M	9/21/2001	3	650	E	3	585	NM
7NRS11	M	9/26/2001	3	735	E	3	745	E
8NRS11	M	9/26/2001	3	707	E	3	689	E
9NRS11	M	10/1/2001	3	707	E	3	725	E
10NRS11	M	10/2/2001	3	602	M	3	610	M
11NRS11	F	10/3/2001	3	679	E	3	672	E
12NRS11	M	10/4/2001	3	650	E	3	653	E
13NRS11	F	10/6/2001	3	756	E	3	745	E
14NRS11	M	10/8/2001	3	620	M	3	601	M
15NRS11	F	10/9/2001	3	644	E	3	589	NM
16NRS11	F	10/9/2001	3	626	M	3	680	E
17NRS11	M	10/21/2001	3	620	M	3	627	M
18NRS11	F	10/28/2001	3	735	E	3	710	E
19NRS11	F	10/30/2001	3	687	E	3	689	E
20NRS11	F	11/1/2001	3	614	M	3	568	NM
21NRS11	F	11/4/2001	3	644	E	3	623	M
22NRS11	F	11/7/2001	3	620	M	3	665	E
23NRS11	M	11/7/2001	3	664	E	3	632	M
24NRS11	M	11/9/2001	3	638	M	3	632	M
25NRS11	F	11/10/2001	3	671	E	3	627	M
26NRS11	F	11/15/2001	3	789	E	3	698	E
27NRS11	F	11/17/2001	3	644	E	3	627	M
28NRS11	F	11/20/2001	3	626	NM	3	680	E
29NRS11	F	11/21/2001	3	789	E	3	745	E
30NRS11	M	11/21/2001	3	664	E	3	642	E
31NRS11	M	11/23/2001	3	620	M	3	585	NM
32NRS11	M	11/24/2001	3	644	E	3	642	E
33NRS11	F	11/24/2001	3	571	NM	3	597	NM
34NRS11	M	11/24/2001	3	564	NM	3	535	NM
35NRS11	F	11/25/2001	3	650	E	3	689	E
36NRS11	F	11/26/2001	3	614	M	3	637	M
37NRS11	F	11/26/2001	3	756	E	3	642	E
38NRS11	F	11/27/2001	3	638	M	3	637	M

39NRS11	F	11/27/2001	3	614	M	3	665	E
40NRS11	F	11/28/2001	3	697	E	3	710	E
41NRS11	F	11/28/2001	3	632	M	3	653	E
42NRS11	F	11/28/2001	3	644	E	3	601	M
43NRS11	F	11/29/2001	3	697	E	3	647	E
44NRS11	F	12/6/2001	3	679	E	3	653	E
45NRS11	F	12/7/2001	3	596	NM	3	535	NM
46NRS11	M	12/15/2001	3	720	E	3	653	E
47NRS11	F	12/20/2001	3	549	NM	3	525	NM
48NRS11	M	12/20/2001	3	614	M	3	614	M
49NRS11	M	12/31/2001	3	707	E	3	665	E
50NRS11	M	1/2/2002	3	620	M	3	725	E
51NRS11	F	1/2/2002	3	671	E	3	689	E
52NRS11	F	1/6/2002	3	697	E	3	672	E
53NRS11	F	1/8/2002	3	614	M	3	605	M
54NRS11	F	1/8/2002	3	735	E	3	689	E
55NRS11	M	1/13/2002	3	602	M	3	627	M
56NRS11	M	1/13/2002	3	564	NM	3	535	NM
57NRS11	M	1/15/2002	3	644	E	3	597	NM
58NRS11	M	1/15/2002	3	608	M	3	610	M
59NRS11	M	1/15/2002	3	697	E	3	659	E
60NRS11	F	1/18/2002	3	756	E	3	672	E
61NRS11	M	1/18/2002	3	657	E	3	665	E
62NRS11	M	1/20/2002	3	657	E	3	637	M
63NRS11	M	1/27/2002	3	602	M	3	555	NM
64NRS11	F	1/31/2002	3	596	NM	3	637	M
65NRS11	F	2/1/2002	3	664	E	3	672	E
66NRS11	M	2/4/2002	3	671	E	3	653	E
67NRS11	M	2/5/2002	3	564	NM	3	623	M
68NRS11	F	2/6/2002	3	638	M	3	632	M
69NRS11	M	2/8/2002	3	697	E	3	689	E
70NRS11	F	2/11/2002	3	644	E	3	605	M
71NRS11	F	2/13/2002	3	571	NM	3	568	NM
72NRS11	F	2/15/2002	3	644	E	3	576	NM
73NRS11	F	2/15/2002	3	650	E	3	597	NM
74NRS11	M	2/19/2002	3	664	E	3	689	E
75NRS11	F	2/25/2002	3	638	M	3	653	E
76NRS11	F	2/26/2002	3	664	E	3	642	E
77NRS11	M	2/27/2002	3	720	E	3	778	E
78NRS11	M	3/1/2002	3	671	E	3	632	M
79NRS11	M	3/2/2002	3	626	M	3	665	E

80NRS11	F	3/2/2002	3	671	E	3	614	M
81NRS11	M	3/9/2002	3	584	NM	3	550	NM
82NRS11	F	3/10/2002	3	756	E	3	665	E
83NRS11	M	3/13/2002	3	620	M	3	568	NM
84NRS11	F	3/28/2002	3	638	M	3	605	M
85NRS11	M	4/1/2002	3	531	NM	3	559	NM
86NRS11	M	4/2/2002	3	679	E	3	689	E
87NRS11	M	4/4/2002	3	687	E	3	642	E
88NRS11	M	4/7/2002	3	671	E	3	710	E
89NRS11	F	4/10/2002	3	644	E	3	698	E
90NRS11	F	4/19/2002	3	687	E	3	653	E
91NRS11	F	4/21/2002	3	650	E	3	589	NM
92NRS11	F	4/22/2002	3	584	NM	3	572	NM
93NRS11	F	5/3/2002	3	626	M	3	610	M
94NRS11	F	5/7/2002	3	638	M	3	589	NM
95NRS11	F	5/7/2002	3	632	M	3	618	M
96NRS11	F	5/13/2002	3	657	E	3	680	E
97NRS11	F	5/20/2002	3	620	M	3	580	NM
98NRS11	F	6/1/2002	3	626	M	3	614	M
99NRS11	F	6/4/2002	3	564	NM	3	519	NM
100NRS11	M	6/4/2002	3	620	M	3	605	M
101NRS11	M	6/5/2002	3	650	E	3	605	M
102NRS11	M	6/12/2002	3	608	M	3	555	NM
103NRS11	M	6/17/2002	3	521	NM	3	601	M
104NRS11	M	6/17/2002	3	644	E	3	593	NM
105NRS11	F	6/21/2002	3	697	E	3	647	E
106NRS11	F	6/28/2002	3	735	E	3	710	E
107NRS11	M	7/2/2002	3	664	E	3	632	M
108NRS11	M	7/3/2002	3	650	E	3	632	M
109NRS11	M	7/4/2002	3	644	E	3	610	M
110NRS11	F	7/6/2002	3	671	E	3	580	NM
111NRS11	F	7/18/2002	3	687	E	3	698	E
112NRS11	M	7/19/2002	3	638	M	3	647	E
113NRS11	F	7/26/2002	3	620	M	3	610	M
114NRS11	F	7/27/2002	3	671	E	3	627	M
115NRS11	F	7/28/2002	3	687	E	3	601	M
116NRS11	M	7/29/2002	3	650	E	3	618	M
117NRS11	F	8/9/2002	3	687	E	3	672	E
118NRS11	F	8/12/2002	3	650	E	3	610	M
119NRS11	F	8/14/2002	3	679	E	3	610	M
120NRS11	M	8/14/2002	3	720	E	3	745	E

121NRS11	M	8/16/2002	3	687	E	3	745	E
122NRS11	F	8/28/2002	3	671	E	3	680	E
123NRS11	M	8/28/2002	3	626	M	3	614	M
124NRS11	M	8/31/2002	3	626	M	3	601	M

ID	Gender	Birthday	PASS 2012: ELA			PASS 2012: Math		
			Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1NRS12	F	9/2/2002	3	753	E	3	772	E
2NRS12	M	9/5/2002	3	705	E	3	659	E
3NRS12	M	9/8/2002	3	656	E	3	665	E
4NRS12	M	9/9/2002	3	574	NM	3	527	NM
5NRS12	M	9/10/2002	3	695	E	3	718	E
6NRS12	F	9/11/2002	3	620	M	3	593	NM
7NRS12	M	9/13/2002	3	695	E	3	652	E
8NRS12	M	9/16/2002	3	649	E	3	589	NM
9NRS12	F	9/16/2002	3	677	E	3	682	E
10NRS12	M	9/19/2002	3	787	E	3	704	E
11NRS12	M	9/30/2002	3	843	E	3	718	E
12NRS12	M	10/2/2002	3	626	M	3	615	M
13NRS12	M	10/7/2002	3	718	E	3	692	E
14NRS12	M	10/7/2002	3	643	E	3	640	M
15NRS12	F	10/10/2002	3	787	E	3	739	E
16NRS12	F	10/13/2002	3	695	E	3	665	E
17NRS12	F	10/17/2002	3	787	E	3	772	E
18NRS12	M	10/17/2002	3	614	M	3	665	E
19NRS12	M	10/18/2002	3	695	E	3	704	E
20NRS12	F	10/19/2002	3	643	E	3	625	E
21NRS12	M	10/23/2002	3	686	E	3	620	M
22NRS12	M	10/28/2002	3	753	E	3	692	E
23NRS12	F	10/28/2002	3	686	E	3	682	E
24NRS12	M	10/28/2002	3	592	NM	3	551	NM
25NRS12	M	11/8/2002	3	567	NM	3	516	NM
26NRS12	F	11/9/2002	3	614	M	3	606	M
27NRS12	M	11/13/2002	3	843	E	3	739	E
28NRS12	M	11/15/2002	3	753	E	3	718	E
29NRS12	M	11/15/2002	3	643	E	3	589	NM
30NRS12	F	11/20/2002	3	733	E	3	673	E
31NRS12	M	11/20/2002	3	614	M	3	589	NM
32NRS12	M	11/22/2002	3	620	M	3	585	NM
33NRS12	F	11/23/2002	3	718	E	3	739	M
34NRS12	M	11/24/2002	3	695	E	3	739	E
35NRS12	M	11/26/2002	3	553	NM	3	527	NM
36NRS12	F	12/4/2002	3	574	NM	3	572	NM
37NRS12	M	12/6/2002	3	631	M	3	572	NM
38NRS12	M	12/9/2002	3	626	M	3	615	M

39NRS12	M	12/12/2002	3	686	E	3	673	E
40NRS12	F	12/19/2002	3	631	M	3	602	M
41NRS12	F	12/22/2002	3	626	M	3	635	M
42NRS12	F	12/24/2002	3	733	E	3	673	E
43NRS12	M	12/25/2002	3	686	E	3	635	M
44NRS12	M	12/26/2002	3	686	E	3	635	M
45NRS12	M	12/26/2002	3	598	NM	3	597	NM
46NRS12	F	12/26/2002	3	567	NM	3	564	NM
47NRS12	F	12/27/2002	3	643	E	3	659	E
48NRS12	F	12/31/2002	3	620	M	3	640	M
49NRS12	F	1/2/2003	3	686	E	3	652	E
50NRS12	M	1/5/2003	3	718	E	3	673	E
51NRS12	F	1/6/2003	3	626	M	3	564	NM
52NRS12	M	1/8/2003	3	686	E	3	704	E
53NRS12	F	1/9/2003	3	843	E	3	718	E
54NRS12	F	1/9/2003	3	787	E	3	718	E
55NRS12	F	1/13/2003	3	631	M	3	593	NM
56NRS12	F	1/14/2003	3	626	M	3	630	M
57NRS12	F	1/21/2003	3	580	NM	3	555	NM
58NRS12	M	1/23/2003	3	662	E	3	625	M
59NRS12	M	1/23/2003	3	686	E	3	682	E
60NRS12	F	1/24/2003	3	677	E	3	635	M
61NRS12	M	1/24/2003	3	705	E	3	659	E
62NRS12	M	1/25/2003	3	787	E	3	692	E
63NRS12	F	1/27/2003	3	567	NM	3	560	M
64NRS12	M	1/28/2003	3	733	E	3	718	E
65NRS12	M	2/1/2003	3	686	E	3	692	E
66NRS12	F	2/2/2003	3	718	E	3	635	M
67NRS12	F	2/11/2003	3	586	NM	3	510	NM
68NRS12	M	2/12/2003	3	656	E	3	640	M
69NRS12	F	2/12/2003	3	670	E	3	659	E
70NRS12	F	2/13/2003	3	718	E	3	692	E
71NRS12	M	2/14/2003	3	718	E	3	704	E
72NRS12	M	2/18/2003	3	695	E	3	692	E
73NRS12	F	2/19/2003	3	677	E	3	635	M
74NRS12	M	2/20/2003	3	545	NM	3	551	NM
75NRS12	M	2/21/2003	3	686	E	3	682	E
76NRS12	M	2/21/2003	3	631	M	3	646	E
77NRS12	F	2/27/2003	3	643	E	3	589	NM
78NRS12	M	2/27/2003	3	662	E	3	704	E
79NRS12	F	3/8/2003	3	643	E	3	620	M

80NRS12	F	3/12/2003	3	695	E	3	625	M
81NRS12	F	3/15/2003	3	733	E	3	682	E
82NRS12	M	3/15/2003	3	733	E	3	718	E
83NRS12	F	3/18/2003	3	787	E	3	739	E
84NRS12	F	3/21/2003	3	753	E	3	739	E
85NRS12	M	3/27/2003	3	574	NM	3	620	M
86NRS12	F	3/28/2003	3	753	E	3	659	E
87NRS12	M	3/29/2003	3	718	E	3	692	E
88NRS12	M	4/1/2003	3	649	E	3	659	E
89NRS12	F	4/1/2003	3	536	NM	3	522	NM
90NRS12	M	4/6/2003	3	670	E	3	682	E
91NRS12	M	4/7/2003	3	662	E	3	606	M
92NRS12	M	4/8/2003	3	545	NM	3	542	NM
93NRS12	F	4/9/2003	3	574	NM	3	560	NM
94NRS12	F	4/9/2003	3	718	E	3	704	E
95NRS12	M	4/11/2003	3	567	NM	3	568	NM
96NRS12	F	4/14/2003	3	686	E	3	673	E
97NRS12	M	4/15/2003	3	603	M	3	615	M
98NRS12	F	4/16/2003	3	620	M	3	593	NM
99NRS12	F	4/18/2003	3	637	M	3	589	NM
100NRS12	M	4/18/2003	3	580	NM	3	537	NM
101NRS12	F	4/19/2003	3	631	M	3	611	M
102NRS12	F	4/20/2003	3	560	NM	3	542	NM
103NRS12	M	4/21/2003	3	574	NM	3	572	NM
104NRS12	F	4/22/2003	3	626	M	3	606	M
105NRS12	M	4/23/2003	3	643	E	3	611	M
106NRS12	F	4/27/2003	3	649	E	3	673	E
107NRS12	M	4/28/2003	3	567	NM	3	532	NM
108NRS12	M	4/29/2003	3	686	E	3	652	E
109NRS12	F	5/3/2003	3	695	E	3	652	E
110NRS12	M	5/12/2003	3	670	E	3	665	E
111NRS12	F	5/14/2003	3	705	E	3	682	E
112NRS12	M	5/15/2003	3	631	M	3	665	E
113NRS12	F	5/21/2003	3	705	E	3	646	E
114NRS12	F	5/21/2003	3	670	E	3	630	M
115NRS12	M	5/25/2003	3	753	E	3	673	E
116NRS12	M	6/7/2003	3	536	NM	3	593	NM
117NRS12	F	6/8/2003	3	631	M	3	635	M
118NRS12	F	6/10/2003	3	787	E	3	718	E
119NRS12	F	6/13/2003	3	643	E	3	673	E
120NRS12	M	6/16/2003	3	626	M	3	682	E

121NRS12	F	6/21/2003	3	626	M	3	585	NM
122NRS12	F	6/27/2003	3	718	E	3	682	E
123NRS12	M	6/29/2003	3	609	M	3	568	NM
124NRS12	F	7/2/2003	3	662	E	3	704	E
125NRS12	M	7/4/2003	3	733	E	3	646	E
126NRS12	F	7/11/2003	3	753	E	3	673	E
127NRS12	M	7/15/2003	3	598	NM	3	630	M
128NRS12	F	7/17/2003	3	631	M	3	606	M
129NRS12	F	7/18/2003	3	695	E	3	659	E
130NRS12	F	7/26/2003	3	787	E	3	772	E
131NRS12	F	7/27/2003	3	656	E	3	602	M
132NRS12	F	7/31/2003	3	718	E	3	665	E
133NRS12	F	7/31/2003	3	586	NM	3	516	NM
134NRS12	M	8/1/2003	3	637	M	3	606	M
135NRS12	F	8/11/2003	3	705	E	3	659	E
136NRS12	M	8/11/2003	3	662	E	3	646	E
137NRS12	F	8/11/2003	3	643	E	3	585	NM
138NRS12	F	8/11/2003	3	677	E	3	718	E
139NRS12	F	8/13/2003	3	603	M	3	560	NM
140NRS12	F	8/17/2003	3	631	M	3	589	NM
141NRS12	F	8/19/2003	3	670	E	3	646	E
142NRS12	F	8/27/2003	3	626	M	3	659	E
143NRS12	F	8/27/2003	3	695	E	3	665	E
144NRS12	M	8/29/2003	3	670	E	3	625	M
145NRS12	M	8/30/2003	3	686	E	3	772	E
146NRS12	M	8/31/2003	3	753	E	3	772	E

			PASS 2013: ELA			PASS 2013: Math		
ID	Gender	Birthday	Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1NRS13	F	9/3/2003	3	662	E	3	659	E
2NRS13	M	9/5/2003	3	691	E	3	725	E
3NRS13	F	9/6/2003	3	596	NM	3	665	E
4NRS13	M	9/6/2003	3	576	NM	3	564	NM
5NRS13	M	9/9/2003	3	649	E	3	659	E
6NRS13	M	9/10/2003	3	662	E	3	665	E
7NRS13	M	9/11/2003	3	747	E	3	833	E
8NRS13	F	9/14/2003	3	625	M	3	610	M
9NRS13	M	9/16/2003	3	683	E	3	698	E
10NRS13	M	9/23/2003	3	625	M	3	647	E
11NRS13	F	9/29/2003	3	662	E	3	689	E
12NRS13	F	10/3/2003	3	662	E	3	665	E
13NRS13	F	10/7/2003	3	620	M	3	632	M
14NRS13	F	10/12/2003	3	732	E	3	745	E
15NRS13	F	10/13/2003	3	709	E	3	637	M
16NRS13	F	10/14/2003	3	709	E	3	778	E
17NRS13	M	10/16/2003	3	691	E	3	689	E
18NRS13	F	10/19/2003	3	649	E	3	665	E
19NRS13	F	10/21/2003	3	675	E	3	647	E
20NRS13	F	10/25/2003	3	675	E	3	725	E
21NRS13	M	10/30/2003	3	691	E	3	672	E
22NRS13	F	10/31/2003	3	655	E	3	601	M
23NRS13	F	11/1/2003	3	719	E	3	698	E
24NRS13	M	11/2/2003	3	620	M	3	665	E
25NRS13	M	11/11/2003	3	596	NM	3	593	NM
26NRS13	M	11/12/2003	3	602	M	3	623	M
27NRS13	F	11/13/2003	3	649	E	3	610	M
28NRS13	M	11/13/2003	3	675	E	3	653	E
29NRS13	F	11/14/2003	3	747	E	3	778	E
30NRS13	M	11/14/2003	3	655	E	3	632	M
31NRS13	M	11/18/2003	3	622	E	3	653	E
32NRS13	F	11/18/2003	3	699	E	3	680	E
33NRS13	F	11/20/2003	3	649	E	3	689	E
34NRS13	M	11/27/2003	3	576	NM	3	555	NM
35NRS13	F	11/28/2003	3	691	E	3	725	E
36NRS13	M	12/2/2003	3	614	M	3	564	NM
37NRS13	F	12/5/2003	3	655	E	3	576	NM
38NRS13	M	12/7/2003	3	691	E	3	710	E

39NRS13	F	12/11/2003	3	699	E	3	632	M
40NRS13	M	12/14/2003	3	589	NM	3	642	E
41NRS13	F	12/15/2003	3	655	E	3	659	E
42NRS13	M	12/15/2003	3	596	NM	3	585	NM
43NRS13	M	12/17/2003	3	631	M	3	698	E
44NRS13	F	12/18/2003	3	699	E	3	672	E
45NRS13	M	12/23/2003	3	596	NM	3	605	M
46NRS13	F	12/24/2003	3	683	E	3	665	E
47NRS13	F	12/26/2003	3	608	M	3	597	NM
48NRS13	M	12/27/2003	3	709	E	3	689	E
49NRS13	M	12/29/2003	3	668	E	3	653	E
50NRS13	F	1/1/2004	3	732	E	3	725	E
51NRS13	F	1/1/2004	3	668	E	3	689	E
52NRS13	M	1/5/2004	3	620	M	3	589	NM
53NRS13	M	1/8/2004	3	709	E	3	745	E
54NRS13	M	1/10/2004	3	602	M	3	618	M
55NRS13	M	1/11/2004	3	747	E	3	745	E
56NRS13	M	1/11/2004	3	691	E	3	710	E
57NRS13	M	1/13/2004	3	719	E	3	689	E
58NRS13	F	1/16/2004	3	576	NM	3	614	M
59NRS13	M	1/17/2004	3	589	NM	3	545	NM
60NRS13	M	1/18/2004	3	662	E	3	698	E
61NRS13	F	1/19/2004	3	768	E	3	710	E
62NRS13	M	1/20/2004	3	691	E	3	725	E
63NRS13	F	1/21/2004	3	802	E	3	778	E
64NRS13	F	1/28/2004	3	675	E	3	725	E
65NRS13	M	1/30/2004	3	625	M	3	689	E
66NRS13	M	2/6/2004	3	643	E	3	680	E
67NRS13	F	2/10/2004	3	589	NM	3	580	NM
68NRS13	M	2/10/2004	3	583	NM	3	564	NM
69NRS13	M	2/18/2004	3	709	E	3	659	E
70NRS13	M	2/24/2004	3	683	E	3	653	E
71NRS13	F	2/24/2004	3	719	E	3	680	E
72NRS13	M	2/24/2004	3	631	M	3	647	E
73NRS13	F	2/26/2004	3	699	E	3	689	E
74NRS13	F	2/26/2004	3	631	M	3	637	M
75NRS13	M	3/1/2004	3	699	E	3	665	E
76NRS13	F	3/12/2004	3	637	M	3	610	M
77NRS13	F	3/12/2004	3	662	E	3	672	E
78NRS13	F	3/12/2004	3	625	M	3	623	M
79NRS13	M	3/19/2004	3	675	E	3	653	E

80NRS13	F	3/20/2004	3	625	M	3	653	E
81NRS13	M	3/21/2004	3	655	E	3	580	NM
82NRS13	M	3/29/2004	3	596	NM	3	605	M
83NRS13	F	3/30/2004	3	631	M	3	585	NM
84NRS13	F	4/5/2004	3	683	E	3	725	E
85NRS13	M	4/11/2004	3	602	M	3	589	NM
86NRS13	F	4/11/2004	3	662	E	3	642	E
87NRS13	F	4/14/2004	3	668	E	3	698	E
88NRS13	F	4/15/2004	3	683	E	3	778	E
89NRS13	F	4/15/2004	3	691	E	3	745	E
90NRS13	F	4/17/2004	3	649	E	3	710	E
91NRS13	M	4/26/2004	3	625	M	3	653	E
92NRS13	M	4/27/2004	3	505	NM	3	512	NM
93NRS13	F	5/9/2004	3	596	NM	3	555	NM
94NRS13	M	5/14/2004	3	637	M	3	618	M
95NRS13	F	5/16/2004	3	655	E	3	614	M
96NRS13	F	5/16/2004	3	643	E	3	618	M
97NRS13	M	5/18/2004	3	732	E	3	659	E
98NRS13	M	5/19/2004	3	719	E	3	698	E
99NRS13	M	5/20/2004	3	643	E	3	680	E
100NRS13	M	5/21/2004	3	553	NM	3	541	NM
101NRS13	M	5/24/2004	3	583	NM	3	550	NM
102NRS13	F	5/28/2004	3	589	NM	3	541	NM
103NRS13	F	6/1/2004	3	719	E	3	833	E
104NRS13	F	6/1/2004	3	691	E	3	710	E
105NRS13	M	6/4/2004	3	625	M	3	647	E
106NRS13	M	6/8/2004	3	691	E	3	672	E
107NRS13	F	6/10/2004	3	583	NM	3	610	M
108NRS13	M	6/11/2004	3	655	E	3	698	E
109NRS13	M	6/11/2004	3	662	E	3	653	E
110NRS13	M	6/12/2004	3	649	E	3	623	M
111NRS13	M	6/13/2004	3	631	M	3	647	E
112NRS13	F	6/17/2004	3	691	E	3	698	E
113NRS13	M	6/19/2004	3	675	E	3	665	E
114NRS13	M	6/21/2004	3	608	M	3	680	E
115NRS13	F	6/21/2004	3	655	E	3	642	E
116NRS13	F	6/21/2004	3	683	E	3	593	NM
117NRS13	M	6/22/2004	3	596	NM	3	535	NM
118NRS13	F	6/30/2004	3	643	e	3	653	E
119NRS13	M	7/1/2004	3	709	E	3	665	E
120NRS13	F	7/1/2004	3	719	E	3	745	E

121NRS13	M	7/1/2004	3	747	E	3	689	E
122NRS13	M	7/3/2004	3	649	E	3	627	M
123NRS13	F	7/7/2004	3	732	E	3	672	E
124NRS13	M	7/9/2004	3	747	E	3	745	E
125NRS13	M	7/9/2004	3	662	E	3	689	E
126NRS13	F	7/10/2004	3	608	M	3	627	M
127NRS13	F	7/12/2004	3	747	E	3	710	E
128NRS13	F	7/18/2004	3	655	E	3	653	E
129NRS13	F	7/20/2004	3	719	E	3	665	E
130NRS13	F	7/20/2004	3	602	M	3	580	NM
131NRS13	F	7/24/2004	3	675	E	3	680	E
132NRS13	F	7/26/2004	3	649	E	3	653	E
133NRS13	F	7/27/2004	3	620	M	3	593	NM
134NRS13	M	7/29/2004	3	643	E	3	672	E
135NRS13	F	8/2/2004	3	625	M	3	614	M
136NRS13	F	8/10/2004	3	643	E	3	623	M
137NRS13	F	8/10/2004	3	699	E	3	637	M
138NRS13	M	8/14/2004	3	655	E	3	545	NM
139NRS13	F	8/17/2004	3	802	E	3	680	E
140NRS13	F	8/18/2004	3	709	E	3	672	E
141NRS13	F	8/26/2004	3	691	E	3	745	E

ID	Gender	Birthday	PASS 2014: ELA			PASS 2014: Math		
			Grade Level Tested	Scale Score	Level	Grade Level Tested	Scale Score	Level
1NRS14	F	9/2/2004	3	756	E	3	741	E
2NRS14	F	9/3/2004	3	789	E	3	707	E
3NRS14	M	9/3/2004	3	707	E	3	640	M
4NRS14	F	9/5/2004	3	671	E	3	635	M
5NRS14	F	9/7/2004	3	687	E	3	695	E
6NRS14	F	9/9/2004	3	679	E	3	670	E
7NRS14	F	9/9/2004	3	620	M	3	616	M
8NRS14	F	9/21/2004	3	664	E	3	677	E
9NRS14	M	9/21/2004	3	590	NM	3	630	M
10NRS14	M	9/21/2004	3	608	M	3	616	M
11NRS14	F	9/22/2004	3	679	E	3	707	E
12NRS14	M	9/24/2004	3	671	E	3	707	E
13NRS14	M	9/27/2004	3	632	M	3	686	E
14NRS14	F	9/27/2004	3	531	NM	3	549	NM
15NRS14	M	9/27/2004	3	789	E	3	741	E
16NRS14	M	9/29/2004	3	671	E	3	677	E
17NRS14	F	9/29/2004	3	707	E	3	721	E
18NRS14	M	9/29/2004	3	697	E	3	741	E
19NRS14	M	10/3/2004	3	608	M	3	612	M
20NRS14	F	10/4/2004	3	720	E	3	686	E
21NRS14	F	10/5/2004	3	720	E	3	830	E
22NRS14	F	10/5/2004	3	632	M	3	686	NE
23NRS14	M	10/10/2004	3	707	E	3	830	E
24NRS14	M	10/13/2004	3	707	E	3	686	E
25NRS14	M	10/17/2004	3	664	E	3	686	E
26NRS14	M	10/18/2004	3	614	M	3	686	E
27NRS14	F	10/18/2004	3	756	E	3	721	E
28NRS14	F	10/21/2004	3	671	E	3	686	E
29NRS14	F	10/22/2004	3	789	E	3	741	E
30NRS14	F	10/25/2004	3	664	E	3	695	E
31NRS14	F	11/2/2004	3	638	M	3	635	M
32NRS14	F	11/5/2004	3	614	M	3	663	E
33NRS14	M	11/5/2004	3	596	NM	3	558	NM
34NRS14	F	11/5/2004	3	707	E	3	686	E
35NRS14	F	11/5/2004	3	614	M	3	558	NM
36NRS14	F	11/6/2004	3	735	E	3	830	E
37NRS14	M	11/7/2004	3	584	NM	3	540	NM
38NRS14	F	11/9/2004	3	707	E	3	830	E

39NRS14	M	11/10/2004	3	657	E	3	621	M
40NRS14	F	11/17/2004	3	632	M	3	686	E
41NRS14	F	11/18/2004	3	602	M	3	563	NM
42NRS14	F	11/22/2004	3	707	E	3	670	E
43NRS14	F	11/24/2004	3	707	E	3	707	E
44NRS14	M	11/27/2004	3	590	NM	3	583	NM
45NRS14	M	11/30/2004	3	679	E	3	686	E
46NRS14	F	11/30/2004	3	596	NM	3	612	M
47NRS14	F	12/8/2004	3	845	E	3	721	E
48NRS14	F	12/12/2004	3	638	M	3	571	NM
49NRS14	F	12/15/2004	3	697	E	3	774	E
50NRS14	F	12/17/2004	3	614	M	3	707	E
51NRS14	M	12/21/2004	3	571	NM	3	608	M
52NRS14	M	12/21/2004	3	657	E	3	695	E
53NRS14	M	12/23/2004	3	614	M	3	635	M
54NRS14	F	12/23/2004	3	626	M	3	650	E
55NRS14	M	12/26/2004	3	664	E	3	741	E
56NRS14	M	12/28/2004	3	596	NM	3	595	NM
57NRS14	F	12/29/2004	3	664	E	3	575	NM
58NRS14	F	1/7/2005	3	756	E	3	774	E
59NRS14	F	1/7/2005	3	650	E	3	616	M
60NRS14	M	1/8/2005	3	596	NM	3	650	E
61NRS14	M	1/9/2005	3	707	E	3	670	E
62NRS14	F	1/11/2005	3	657	E	3	695	E
63NRS14	M	1/12/2005	3	557	NM	3	535	NM
64NRS14	M	1/14/2005	3	735	E	3	670	E
65NRS14	M	1/14/2005	3	671	E	3	695	E
66NRS14	M	1/14/2005	3	578	NM	3	583	NM
67NRS14	F	1/14/2005	3	707	E	3	695	E
68NRS14	M	1/17/2005	3	626	M	3	656	E
69NRS14	M	1/19/2005	3	557	NM	3	549	NM
70NRS14	F	1/20/2005	3	735	E	3	721	E
71NRS14	M	1/20/2005	3	756	E	3	741	E
72NRS14	F	1/24/2005	3	720	E	3	686	E
73NRS14	M	1/24/2005	3	687	E	3	670	E
74NRS14	F	1/26/2005	3	657	E	3	640	M
75NRS14	M	1/26/2005	3	687	E	3	741	E
76NRS14	M	1/30/2005	3	697	E	3	670	E
77NRS14	F	2/7/2005	3	697	E	3	663	E
78NRS14	M	2/8/2005	3	614	M	3	677	E
79NRS14	M	2/8/2005	3	620	M	3	686	E

80NRS14	M	2/8/2005	3	531	NM	3	616	M
81NRS14	F	2/14/2005	3	626	M	3	650	E
82NRS14	F	2/15/2005	3	578	NM	3	511	NM
83NRS14	F	2/15/2005	3	614	M	3	591	NM
84NRS14	M	2/17/2005	3	657	E	3	707	E
85NRS14	M	2/18/2005	3	571	NM	3	621	M
86NRS14	F	2/22/2005	3	650	E	3	707	E
87NRS14	M	2/24/2005	3	650	E	3	707	E
88NRS14	M	2/28/2005	3	644	E	3	645	E
89NRS14	F	3/1/2005	3	720	E	3	695	E
90NRS14	F	3/2/2005	3	632	M	3	677	E
91NRS14	F	3/4/2005	3	845	E	3	707	E
92NRS14	F	3/7/2005	3	644	E	3	630	M
93NRS14	M	3/8/2005	3	590	NM	3	558	NM
94NRS14	F	3/8/2005	3	657	E	3	677	E
95NRS14	F	3/9/2005	3	735	M	3	640	M
96NRS14	M	3/21/2005	3	687	E	3	721	E
97NRS14	M	3/21/2005	3	679	E	3	741	E
98NRS14	M	3/22/2005	3	664	E	3	583	NM
99NRS14	M	3/24/2005	3	620	M	3	630	M
100NRS14	F	3/25/2005	3	614	M	3	663	E
101NRS14	F	3/26/2005	3	657	E	3	591	NM
102NRS14	F	3/26/2005	3	644	E	3	663	E
103NRS14	F	3/29/2005	3	657	E	3	608	M
104NRS14	F	3/30/2005	3	671	E	3	645	E
105NRS14	F	4/1/2005	3	697	E	3	630	M
106NRS14	M	4/2/2005	3	638	M	3	695	E
107NRS14	F	4/8/2005	3	697	E	3	670	E
108NRS14	M	4/8/2005	3	679	E	3	645	E
109NRS14	M	4/10/2005	3	644	E	3	630	M
110NRS14	F	4/11/2005	3	608	M	3	583	NM
111NRS14	F	4/12/2005	3	584	NM	3	583	NM
112NRS14	F	4/12/2005	3	687	E	3	635	M
113NRS14	F	4/13/2005	3	687	E	3	741	E
114NRS14	M	4/15/2005	3	614	M	3	612	M
115NRS14	F	4/21/2005	3	707	E	3	707	E
116NRS14	M	4/22/2005	3	679	E	3	707	E
117NRS14	M	4/23/2005	3	735	M	3	830	E
118NRS14	M	4/26/2005	3	644	E	3	625	M
119NRS14	M	4/26/2005	3	789	E	3	721	E
120NRS14	M	4/26/2005	3	614	M	3	640	M

121NRS14	M	4/29/2005	3	644	E	3	695	E
122NRS14	F	5/2/2005	3	650	E	3	595	NM
123NRS14	M	5/4/2005	3	687	E	3	774	E
124NRS14	F	5/5/2005	3	679	E	3	663	E
125NRS14	M	5/6/2005	3	789	E	3	774	E
126NRS14	M	5/10/2005	3	557	NM	3	571	NM
127NRS14	M	5/11/2005	3	608	M	3	608	M
128NRS14	M	5/13/2005	3	650	E	3	635	M
129NRS14	M	5/16/2005	3	602	M	3	663	E
130NRS14	F	5/19/2005	3	571	NM	3	595	NM
131NRS14	M	5/20/2005	3	687	E	3	695	E
132NRS14	F	5/22/2005	3	735	E	3	774	E
133NRS14	M	5/25/2005	3	549	NM	3	545	NM
134NRS14	F	5/30/2005	3	608	M	3	625	M
135NRS14	M	6/1/2005	3	720	E	3	721	E
136NRS14	F	6/5/2005	3	687	E	3	640	M
137NRS14	F	6/6/2005	3	679	E	3	677	E
138NRS14	M	6/10/2005	3	596	NM	3	621	M
139NRS14	M	6/12/2005	3	620	M	3	645	E
140NRS14	F	6/14/2005	3	626	M	3	616	M
141NRS14	M	6/18/2005	3	664	E	3	695	E
142NRS14	F	6/24/2005	3	638	M	3	625	M
143NRS14	M	6/26/2005	3	756	E	3	663	E
144NRS14	M	6/29/2005	3	578	NM	3	621	M
145NRS14	M	7/5/2005	3	664	E	3	663	E
146NRS14	M	7/6/2005	3	671	E	3	707	NM
147NRS14	M	7/14/2005	3	679	E	3	663	E
148NRS14	F	7/19/2005	3	845	E	3	774	E
149NRS14	F	7/22/2005	3	664	E	3	665	E
150NRS14	M	7/26/2005	3	549	NM	3	554	NM
151NRS14	F	7/27/2005	3	626	M	3	604	M
152NRS14	M	7/27/2005	3	626	M	3	621	M
153NRS14	F	8/2/2005	3	644	E	3	635	M
154NRS14	M	8/6/2005	3	557	NM	3	571	NM
155NRS14	M	8/8/2005	3	626	M	3	608	M
156NRS14	F	8/11/2005	3	571	NM	3	583	NM
157NRS14	F	8/15/2005	3	571	NM	3	640	M
158NRS14	M	8/16/2005	3	697	E	3	774	E
159NRS14	F	8/21/2005	3	638	M	3	645	E
160NRS14	F	8/23/2005	3	596	NM	3	612	M
161NRS14	F	8/24/2005	3	707	E	3	721	E

162NRS14	F	8/24/2005	3	697	E	3	677	E
163NRS14	M	8/25/2005	3	531	NM	3	554	NM
164NRS14	M	8/30/2005	3	614	M	3	545	NM
165NRS14	F	8/31/2005	3	657	E	3	612	M