# An Investigation Into The Use Of Retention As An Intervention Strategy For Struggling Students As Measured By Student Success On 

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#### Abstract

Retention of students having academic difficulties continues to be a very popular intervention, even though many studies suggest that retention of students does not improve their academic success or their social and emotional attitude towards school. This study was based on an analysis of 10,875 Seminole County students that had been retained at least one time in their educational career. The study used 2006-2007 FCAT Reading and Math scores to determine the success of their retentions. Students were grouped by the categories of gender, age, race, grade retained, ESE status, ELL status and SES and their success evaluated. The study supports the conclusions of the critics of retention and, based on trends found in the data, makes some recommendations that may improve the retention process. Specifically, the study recommends (a) for students in the high risk categories alternative interventions instead of or in addition to the retention whenever possible; (b) retention in the first grade rather than in kindergarten; (c) earlier ESE screening of students at risk for retention; (d) continued progress monitoring and intervention after the retention year; (e) continued on-level math instruction for students retained for poor reading achievement; and finally, (f) getting the parents of the retained students more involved in the process.


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# LIST OF ACRONYMS/ABBREVIATIONS 

| CRT | Criterion Reference Test |
| :--- | :--- |
| ELL | English Language Learner |
| ESE | Exceptional Student Education |
| ESL | English as a Second Language |
| ESPP | Electronic Student Performance Profile |
| FCAT | Florida Comprehensive Assessment Test |
| LI | Language Impaired |
| NCLB | No Child Left Behind |
| SES | Socioeconomic Status |
| SLD | Specific Learning Disability |
| SPSS | Statistical Package for the Social Sciences |

## CHAPTER 1 INTRODUCTION

Public education is a fundamental right for all children in America. According to Article 9 of the Florida State Constitution, all children are entitled to a free and appropriate education. Decisions that guarantee and define public education are made—and have been made throughout our history—by the courts and legislatures. Moreover, decisions on how to implement public education are made by federal, state, and local government agencies. Thus, at the elementary and secondary school levels, curriculum, funding and staffing policies are set through locally elected school boards with jurisdiction over school districts; while educational and testing standards are usually set by federal and state governments. One legislative act that has brought education of all students to the forefront of discussion is the No Child Left Behind Act of 2001. The No Child Left Behind Act of 2001, commonly known as NCLB, is a United States Federal Law that was signed on January 8, 2002 (Department of Education, 2007). It reauthorized a number of federal programs to improve the performance of U.S. primary and secondary schools by increasing the measurable standards of accountability. As a result of the act, states, school districts, and schools are providing parents more flexibility in choosing which schools their children will attend (Department of Education, 2007). Additionally, it promoted an increased focus on reading and reenacts the Elementary and Secondary Education Act of 1965. NCLB is the latest federal legislation which enacts the theories of standards-based education reform, formerly known as outcome-based education. This theory is based on the belief that high expectations and setting of goals will result in success for all students (Department of Education, 2007).

The effectiveness of NCLB's measures is controversial. The main area of contention is the continued use of high stakes testing as one of the main determining factors of school and
individual student success. When standards of benchmarks are established so that the success for all students may not be obtainable, strategies and interventions must be determined that will best meet the needs of all students to guarantee future success in school.

In an effort to improve student achievement, NCLB brought attention to many reforms that focus on improving and preparing students for competition within the global market. As a result, American public schools initiated many school reform initiatives. The emphasis of many of these initiatives included the use of rigorous curriculum, research-based instructional models, alternative educational settings, school choice, and privatization. Many of these reforms incorporated the use of high stakes testing to evaluate students and determine promotion and graduation rates. With the use of high stakes testing, the question of how to guarantee success for all students is discussed frequently (Grant, 1997 and Grant and Richardson, 1998). What is the best way to remediate students who are academically at risk? One initiative that was utilized in the past, and continues to be used today, is the retention of students. Retention, although used for many decades, became an increasingly popular intervention practice that many schools use to remediate students who have not mastered the appropriate benchmarks for promotion. As an example, many states, including Florida, used NCLB guidelines to establish mandatory retention legislation.

Approximately 2.4 million students nation wide are retained each year and a disproportional high number of them are economically disadvantaged minorities (Brooks, 2002). Many studies have suggested that students who were retained did not show improvement over time, when compared to similar students who were not retained. In addition, for students who did show improvement, the gains were only for a short period of time after which the students fell behind again (Brooks, 2002; Denton, 2001; Jimerson, Anderson, 2002; Whipple, 2002). One of
the most important trends resulting from such research is that retention at any grade level is associated with increased high school dropout rates (Alexander, Entwisle, Kabbanini, 2003). Research strongly supports alternative programs instead of either retention or social promotion. A few examples of the alternative programs include: mandatory summer school, one-on-one tutoring, after-school programs, and comprehensive, school-wide reforms (Kelly, 1999). One of the suggested solutions is the need to differentiate instruction, and not just repeat the same curriculum and instructional style over again. Alternative programs are being implemented all over the country and showing academic improvement. The research strongly supports the use of alternative programs to meet students' needs and cautions educators about the use of retention (Kelly, 1999; Rudolph, 1999; Ormond, 2001).

## Problem Statement

Retention of students having academic difficulties has become a very popular intervention. Furthermore, since the inception of NCLB, retention of students in Florida who have not shown mastery of specific benchmarks through high stakes tests, specifically the Florida Comprehensive Assessment Test (FCAT) beginning in grade three, has added to the already previously high number of retentions. The main problem facing educators is that this high use of retentions is not being accompanied by a thorough process to determine (a) if the retention of the student is necessary and sufficient, and (b) after the intervention, whether it was successful, and if it was not successful, how to best intervene again.

## Purpose of the Study

The purpose of the study was to determine whether elementary students who were retained are currently having academic success in their current grade based on their FCAT Reading and Math score. Students were divided into the categories of gender, age, race, SES, ESE program, ELL program, grade retained, and number of retentions for the evaluation of their success. The desired outcome of this investigation was to create a profile of who is being positively and negatively affected by retention and to offer recommendations to assist in improving the process of using retention as an intervention when deemed necessary or required by law.

## Definition of Terms

Achievement Levels: Five categories of achievement that represent the success students demonstrate with the Sunshine State Standards content assessed on the FCAT, Achievement Levels are established using the input of classroom teachers, curriculum specialists, education administrators, and other interested citizens. The Achievement Levels are helpful in interpreting what a student’s scale score represents (Florida Department of Education, 2007).

Accountability: Having the responsibility to perform or produce and being liable for the outcome (Florida Department of Education, 2005).

At Risk Students: Students who are identified as not meeting the goals of an educational program, who may not complete a high school education, or who will not become productive citizens (Florida Department of Education, 2005).

Criterion Referenced Test (CRT): An assessment where an individual's performance is compared to a specific learning objective or performance standard and not to the performance of
other students. Criterion referenced tests show how well students performed on specific goals or standards rather than just telling how their performance compares to a norm group of students nationally (Florida Department of Education, 2007).

Developmental Scale Score: A type of scale score used to determine a student's annual progress from grade to grade. Calculated by converting a student's scale score (100-500) to a scale from 0 to about 3000 that is used for grades 3-11 (Florida Department of Education, 2007).

Differentiated Instructions: Instruction given to students at a level specific to their need that instruction which is different from other instruction given to the whole class (Seminole County Public Schools, 2007).

Exceptional Student Education (ESE): Special education services that are provided to eligible students, e.g., visually impaired or hearing impaired. These services are required by law and are provided to Florida students according to the State Board of Education Rule 6A-6.0331, FAC. Also known as Students with Disabilities (SWD) (Florida Department of Education, 2007).

English Language Learners (ELL): A national-origin-minority student who is limited English-proficient. This term is often preferred over limited English proficient (LEP) as it highlights accomplishment rather than deficits (Florida Department of Education, 2007).

English as a Second Language (ESL): A program of techniques, methodology, and special curriculum designed to teach ELL students English language skills, which may include listening, speaking, reading, writing, study skills, content vocabulary, and cultural orientation. ESL instruction is usually in English with little use of language (Florida Department of Education, 2007).

Florida Comprehensive Assessment Test (FCAT): A state of Florida annual assessment for third through eleventh grade students. Students in third through tenth grade participate in
math and reading tests. Fourth, eighth, and tenth grade students take a writing assessment. Fifth, eighth, and eleventh grade students are assessed in science (Florida Department of Education, 2005).

High Stakes Tests: Tests indicates that the consequences for good (high) or poor (low) performance on a test are substantial. In other words, some very important decisions, such as promotion or retention, entrance into an educational institution, teacher salary, or a school district's autonomy depend on a single test score. (International Reading Association, 2008).

Individual Education Plan: A federally mandated education document for students with disabilities or exceptional education students (Seminole County Public Schools, 2007).

Intervention: Instruction given to struggling students that is beyond that which is given to proficient students, the instruction that prevents failure (Seminole County Public Schools, 2007).

Limited English Proficient: Special education services for non-native speakers of English. LEP students, also known as English Language Learners (ELL), are permitted testing accommodations when taking the FCAT (Florida Department of Education, 2007).

Literacy: The functional capacity to read and reason in order to be a part of society and to be prepared to contribute through higher education, vocational training, or entering the workforce (Florida Department of Education, 2005).

Progress Monitoring Assessment: Assessment used to document student's growth over time (Seminole County Public Schools, 2007).

Retention: The practice of having a student repeat a grade level of schooling. A retained student is sometimes referred to as having been "held back" (Jimerson, 2001).

Scale Score: Score used to report student results for the entire test in FCAT Reading, Mathematics, and Science. Scale scores on the FCAT range from 100 to 500 at each grade level (Florida Department of Education, 2007).

Social promotion: The practice of promoting a student (usually a general education student, rather than a special education student) to the next grade despite their poor grades in order to keep them with social peers. It is sometimes referred to as promotion based on seat time (ERIC Digest Number 161, 2000).

Specific Learning Disability (SLD): A psychological or neurological impairment which meets the state's requirements of a discrepancy between the student's achievement level and cognitive ability (Florida Department of Education, 2005).

Sunshine State Standards: The Florida educational standards on which all curriculums are based; that which is tested on the FCAT (Seminole County Public Schools, 2007).

## Delimitation

This study is delimited to Seminole County Public School District in Florida. Data were obtained from the Seminole County Public Schools’ Electronic Student Performance Profile. The data collected includes data from all 37 elementary schools, 12 middle schools and 10 high schools for the 2006-2007 school year.

## Limitation

This study was limited by the following:

1. The assumption that any student not retained met minimum proficiency requirement.
2. The accuracy of the data provided by Seminole County Public Schools.
3. The student population changed during the summer causing a small discrepancy in the number of students in the different categories.
4. The autonomy given to administration on whether a student is retained.

## Theoretical Framework

This study is founded on the theoretical framework of groupthink as related to the decision making process. Groupthink is a concept that was identified by Irving Janis that refers to faulty decision making that can occur in a group. Janis defined the groupthink as such: "a mode of thinking that people engage in when they are deeply involved in a cohesive group, when the members' striving for unanimity override their motivation to realistically appraise alternative courses of action" (Janis, 1982). McCauley (1987) added that groupthink is a type of thought exhibited by group members who try to avoid conflict and reach consensus without critically testing, analyzing and evaluating ideas. During groupthink, the members of a group avoid sharing or voicing viewpoints and ideas outside the comfort zone of consensus thinking (McCauley, 1987). McCauley (1987) identifies the following three conditions under which groupthink occurs: direct leadership, homogeneity of members’ social background and ideology, and isolation of the group from outside sources of information and analysis.

Within the field of education, the process of groupthink can be seen within the decision making process used to determine what to do with academically at risk students. McCauley's three necessary conditions for groupthink to occur are met in retention decision-making. First, the final decision to retain a student in Seminole County Public Schools is made by the principal. Second, the school system is a very homogeneous group of educators with similar philosophies and backgrounds. Finally, most educators are isolated from the outside world. They tend to
concentrate on the current trends and philosophies. Neither research nor data analysis is conducted at the school or district level. All of these circumstances make deciding whether to retain a student or not a form of groupthink process.

Janis recommends many strategies for avoiding groupthink. Groups can assign role of critical evaluator to each member, divide groups into subgroups, invite experts to sit in on meeting and all effective alternatives should be examined. If groups are aware of groupthink and are constantly checking for the damaging effects of this condition, it can be avoided (Janis, 1982).

## Research Questions

The research was guided by the following questions:

1. How many Seminole County students have one or more retentions?
2. What percent of students at each Seminole County School have been retained at least once?
3. To what extent are students retained in some grades more than in others?
4. To what extent are some categories of students retained more than others?
5. How did students retained in previous years score on the 2006-2007 FCAT Reading and Math tests?
6. How do students retained in the 3rd grade for the first time do on the FCAT Reading and Math tests in later grades?
7. How did the different categories of students previously retained in the primary grades score on the 2006-2007 $3^{\text {rd }}$ grade FCAT Reading and Math tests?

## Hypothesis

Hypothesis One: The mean score of previously retained students on the 2006-2007 FCAT Reading and Math tests is equal to the State Minimum Level 3 Scale Score.

Hypothesis Two: The mean score of students previously retained in $3^{\text {rd }}$ grade on the 2006-2007 FCAT Reading and Math tests is equal to the State Minimum Level 3 Scale Score.

Hypothesis Three: The mean score of students, in specific categories, previously retained in the primary grades on the 2006-2007 FCAT Reading and Math tests is equal to the State Minimum Level 3 Scale Score.

## Overview of Methodology

This study was based on an analysis of 10,875 Seminole County students who had been retained at least one time in their educational career. Data for the analysis resided in two databases, one containing information on all students in the Seminole County School System and the other one containing data on the students previously retained. The analysis was conducted using SPSS statistical procedures and ESPP data queries. The study divided the students into categories and used 2006-2007 FCAT Reading and Math scores to determine the success of retention for each category. In addition, descriptive statistics of the two databases' contents were also generated.

## Organization of the Dissertation

Chapter 1 contains an introduction to the study, a statement of the problem, the purpose of the study, a definition of key terms, the conceptual framework, research questions, overview of methodology, and the organization of the dissertation. Chapter 2 provides a comprehensive
review of the literature and integrates the literature to form a foundation for new research. Chapter 3 describes the general methodological approach, research setting, population and sample, instrumentation and data gathering strategies, and analytical procedures to be used. Chapter 4 presents the results of the data analyses. Chapter 5 includes a summary, conclusions, and implications of the study, and recommendations for future research.

## CHAPTER 2 LITERATURE REVIEW

The purpose of this chapter is to describe research and literature related to retention of students in primary and secondary education programs. Also included in the chapter is research related to alternative intervention strategies and programs for struggling students.

## Number of Students Affected by Retention

Each spring many thousands of students across the country learn that they are going to be retained. Retention or non-promotion is the practice of holding back a student in the same grade for a year or longer, often on the basis of scores on a standardized test (Jimerson, 2001). Over the past 25 years, it has become an increasingly popular, yet controversial, method of improving poor academic performance (Jimerson, 2001). It has been estimated that $5 \%$ to $10 \%$ of students are retained annually in the United States, representing more than 2.4 million children every year (Jimerson, 2001). There is concern that rates of retention may increase as "standards" and "accountability" assume greater emphasis in education. For example, President Clinton, in his 1999 State of the Union address, called for an end to social promotion, which many educational professionals interpreted as a directive to retain low achieving students (Jimerson, 2001). The enactment of the No Child Left Behind Act in 2001 has also contributed to the popularity of retention. Since the inception of No Child Left Behind, elementary students who have not shown mastery of specific benchmarks through high stakes tests have been retained. For example, in the State of Florida, $3^{\text {rd }}$ grade students who do not score on grade level on the state test in reading, the Florida Comprehensive Assessment Test (FCAT), fall into a mandatory retention process unless they qualify for "Good Cause Exemption." In addition, many students are also being
retained in the early grades. According to a national source (U.S. Department of Health and Human Services 2000: 299), 8\% of second graders in 1999 were a year behind as a result of kindergarten or first grade retention. Applied to the roughly 7.2 million kindergartners and first graders in fall 1997, an 8\% retention rate translates into well over a half million children. Research published in the last decade has indicated that by $9^{\text {th }}$ grade some $30 \%$ to $50 \%$ of students will have been retained at least once in their academic careers (Jimerson, 2002). According to NASP Publications, census data indicate the percentage of students retained in each grade has risen steadily over the last 25 years. Whereas in the mid -1960 s about $24 \%$ of boys and $16 \%$ of girls were at least a year behind grade level by sixth grade. In 1990, those percentages ranged from a low of $24 \%$ for white females to a high of $47 \%$ for Hispanic males (U.S. Department of Commerce, Bureau of Census, 1966, 1990, cited in Alexander, Entwisle, \& Dauber, 2003). In 1992, almost $40 \%$ of 14 -year-old males and $20 \%$ of 14 -year-old females were old for their grade (U.S. Department of Commerce, Bureau of Census, 1992; cited in Roderick, 1995). These figures were higher for minorities: over half of African American males and almost half of Hispanic males were old for their grade by age 14.

Over the past five years, Florida school laws addressing student progression and the elimination of social promotion have caused an increase in the number and percentage of students who are not promoted at the end of each school year. From 2000-01 to 2004-05, the number of non-promotions fluctuated between a low of 162,160 reported for 2001-02 and a high of 208,039 reported for 2002-03. Figure 1 shows year-to-year changes in the count of Kindergarten to $12^{\text {th }}$ grade non-promotions in Florida’s schools for the last five years (Florida Department of Education Statistical Brief, 2006).


| Percent Change in Number of K-12 Non-Promotions from Prior Year |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Year | $2001-02$ | $2002-03$ | $2003-04$ | $2004-05$ |
| $\%$ Change | $-6.6 \%$ | $+28.3 \%$ | $-3.1 \%$ | $-5.2 \%$ |

*Data source: Florida Department of Education Automated Student Information Database, end-of-year (Survey 5) data.
Figure 1: K-12 Non-Promotions, 2000-01 to 2004-05

Non-promotions have been notable at the first and third grade levels in elementary schools, as well as for grades 9, 10, and 11, in high schools. In 2002-2003, the increase in the number of students retained at the elementary level coincided with implementation of new state laws requiring mandatory retention of third grade students who are not reading at grade level by the end of the school year (Florida Department of Education Statistical Brief, 2006). In addition, non-promotion in grades 9-12 have also been influenced by increased requirements for graduation and more challenging curriculum standards, such as a statutory requirement for students to take Algebra 1 or an equivalent as part of the high-school mathematics curriculum (Florida Department of Education Statistical Brief, 2006). Also, high school students must pass the Grade 10 FCAT in reading and mathematics to qualify for a standard diploma. The first senior class to be affected by this requirement was the graduating class of 2003 (Florida Department of Education Statistical Brief, 2006). Figure 2 and Table 1 below illustrate the number of students not promoted by grade and school year.


Figure 2: Number of Students Not Promoted, by Grade and School Year

Table 1: Number of Students Not Promoted, by Grade and School Year

|  | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 0 0 - 0 1}$ | 9,412 | 11,503 | 6,392 | 5,804 | 5,198 | 3,091 | 10,020 |
| $\mathbf{2 0 0 1 - 0 2}$ | 10,354 | 11,944 | 6,939 | 6,435 | 7,207 | 3,286 | 8,854 |
| $\mathbf{2 0 0 2 - 0 3}$ | 13,278 | 15,360 | 10,378 | 27,713 | 7,922 | 4,442 | 10,535 |
| $\mathbf{2 0 0 3 - 0 4}$ | 13,725 | 15,623 | 9,623 | 23,348 | 4,505 | 3,865 | 9,887 |
| $\mathbf{2 0 0 4 - 0 5}$ | 14,720 | 15,682 | 9,575 | 20,121 | 4,558 | 2,745 | 10,498 |


|  | Grade 7 | Grade 8 | Grade 9 | Grade 10 | Grade 11 | Grade 12 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 0 0 - 0 1}$ | 11,109 | 7,706 | 59,434 | 21,929 | 14,752 | 7,313 |
| $\mathbf{2 0 0 1 - 0 2}$ | 10,049 | 7,016 | 49,711 | 19,899 | 13,665 | 6,801 |
| $\mathbf{2 0 0 2 - 0 3}$ | 12,079 | 8,547 | 51,638 | 23,576 | 14,395 | 8,176 |
| $\mathbf{2 0 0 3 - 0 4}$ | 10,734 | 8,073 | 52,355 | 24,366 | 17,222 | 8,358 |
| $\mathbf{2 0 0 4 - 0 5}$ | 11,679 | 8,841 | 38,669 | 26,178 | 19,216 | 8,719 |

Following a national trend, in Florida a disproportionate number of Black and Hispanic students are retained. Figure 3 and 4 demonstrate non-promotion numbers and rates for Florida by race (Florida Department of Education Statistical Brief, 2006).


Figure 3: Number of K-12 Non-Promotions by Race, 2004-2005


Figure 4: 2004-2005 K-12 Non-Promotion Rates by Race (Non-promotion rate calculated by dividing number of reported non-promotions by end-of-year student membership.)

In Florida and the nation, some groups of children are more likely to be retained than others. Repeaters differ from never-retained children in many ways that bear on their academic prospects. Different "classes" of retained students can be distinguished from one another on the basis of problems seen at the very start of school (Alexander, Entwisle, \& Dauber, 2003).

Students at a higher risk for retention:

- Are males
- Are African American or Hispanic
- Have a late birthday compared to normal cutoffs
- Have delayed development and or/attention problems
- Live in poverty or in a single-parent household
- Have parents with low educational attainment
- Have parents that are less involved in their education
- Have changed schools more than 2 times (Florida Department of Education Statistical Brief, 2006)


## Effects of Retention on Students

Past research reviews and meta-analyses have concluded that the cumulative evidence does not support the use of grade retention as an academic intervention. According to David Denton (2001), students who struggle in a grade the first time around are unlikely to overcome the problems simply by repeating the grade. The theory behind retention contains a major flaw: the assumption that students need to simply catch-up with their classmates. When in fact, many of these students require intensive programs designed for their individual needs. Simple retention is not the solution. In the few studies that found any positive effects of retention, schools provided the retained students with targeted interventions designed to help them overcome individual problems. Yet, even in these cases, the gains typically were short-lived, and the students fell behind again in future grades (Denton, 2001). For example, in "The Baltimore Study," John Hopkins University researchers spent eight years studying 775 public school students who had been retained in elementary school. The students' performance improved modestly during the year they repeated and for several years after, but then the gains began to fade. Follow-up on some of the retained students in their early 20 s revealed that 65 percent had not finished high school compared with 18 percent of all other students (Denton, 2001). Another
study conducted in Chicago in 1996 suggested that in the beginning retention had a positive impact on test scores; however, a later report found that half of the retained students were required to go to summer school even after repeating the grade and many were required to repeat the grade a second time (Denton, 2001). Anderson, Jimerson, and Whipple (2002) found that typically the test scores of students who are retained in the primary grades may increase for a couple of years and then decline below those of their equally low achieving but socially promoted peers.

The majority of studies conducted over the last few decades suggest the practice does more harm than good. In a 1989 analysis of 63 empirical studies, University of Georgia professor C. Thomas Holmes found 54 studies of the 63 resulted in overall negative effects. Retention harmed students' achievement, attendance record, personal adjustment in school, and attitude toward school. The studies were conducted in a wide range of districts around the country. The analysis compared retained students in elementary and junior high school to matched groups of equally low-performing peers who were promoted. When Holmes specifically compared $1^{\text {st }}$ grade retained students to those who were promoted, he found that students who were retained didn't do as well as those who moved on. A year later, when the retained students had finished $2^{\text {nd }}$ grade, they still fell short of the $2^{\text {nd }}$ grade performance of their promoted peers (Holmes, 1989).

These findings were echoed in Reynolds' 1992 study of 1,200 minority children in Chicago. Twenty percent of the students in his sample were retained at least once between kindergarten and $3^{\text {rd }}$ grade - more than twice the national average. When Reynolds tested their reading skills, he found poor performers who had been promoted moved eight months ahead of their peers who had been retained. In mathematics, the promoted group gained seven months on
their peers. By the time the retained students reached $3^{\text {rd }}$ grade, Reynolds found they were still only working at a $2^{\text {nd }}$ grade level (Reynolds, 1992).

One of the most important trends that the research discovered is that retention at any grade level is associated with subsequent high school dropout rates. In the article, "School Dropouts: Home and School Effects," (2003) the research found that repeating a grade was a strong dropout predictor, with 71 percent of retained students eventually dropping out of school. The dropout rate for students held back twice was 80 percent, and 94 percent of students held back in both elementary and middle school ultimately dropped out (Alexander, Entwisle, \& Kabbani, 2003).

Lorrie Shepard has seen similar results in her research. She has conducted several studies on the effects of retention - in particular, its relationship to the dropout rate. In a controlled 1992 study, she found students who repeated a year were 20 to 30 percent more likely to drop out of school (Shepard \& Smith, 1990). Another study, conducted in 2002 by the University of California provided a comprehensive review of dropout research that examined grade retention within both associative and predictive models. A systematic review of seventeen studies examining dropping out of high school prior to graduation demonstrates that grade retention is one of the most powerful predictors of dropout status (Anderson, Jimerson, \& Whipple, 2002). As discussed in other research, the short-term benefits of grade retention may dissipate and culminate in later school withdrawal. The likelihood of dropout is considerably greater for students who have been retained more than once. Students that are retained more than once are $40 \%$ to $50 \%$ more likely to drop out (Anderson, Jimerson, \& Whipple, 2002). Upon reflecting on the short-term outcomes associated with grade retention, Dawson concludes, "it could be said, that we've won the battle but lost the war (cited by Anderson, Jimerson, \& Whipple, 2002).

## Delaying Kindergarten Entrance and Kindergarten Retention

While retention continues to occur nationally, late kindergarten enrollment has emerged among parents and educators seeking to mitigate the harmful effects of retention (Frey, 2005). The appropriate age for students to begin school is an issue of debate for educators, administrators, and parents. Over the last decade, many young children have been enrolled a year or more after their fifth birthday in the hope of giving them an opportunity to develop early literacy behaviors (Frey, 2005). In 1995, 9\% of all first and second graders had experienced delayed entry into kindergarten, according to the National Household Education Survey (Frey, 2005). The parents of these children typically cite one or two reasons for doing so - either the child's birthday occurs late in the year, making him or her younger than peers, or the child has exhibited less mature behavior than others of the same age (Frey, 2005). In both cases the parents hope that their child will benefit from another year of growth and development before entering kindergarten. In some cases parents delay their child's start to kindergarten in order to give them a physical, emotional, and social advantage. For this reason, the purposeful delay of entry into kindergarten is sometimes called, "academic redshirting" (Frey, 2005). The use of delayed kindergarten entry has become so popular that a survey of state education officials estimated between 10\% and 50\% of children experience delayed kindergarten enrollment (Frey, 2005). The prevalence of academic redshirting is often seen in predominantly middle class families. According to Cosden, Zimmer and Tuss, (1993) there is evidence that children from higher income households are more likely to experience delayed kindergarten. Delaying enrollment in school can be burdensome for many families, for school attendance represents free childcare as well as an education (Frey, 2005).

Many studies have been conducted to determine if this delaying of entrance into kindergarten makes a significant difference. A comparison study of 314 second graders who had either been retained or experienced delayed enrollment found no significant differences in academic performance (Kunder, May and Brent, 1995). Lincove and Painter (2006) also concluded that redshirting is not an effective tool for improving student outcomes and in the long run has little effect on academic and social success in high school and young adulthood. They completed a study that addressed the issue of whether there are long-term advantages for delaying kindergarten entry until age 6 . Specifically the analysis focuses on the effects of age at school entry during a youth's high school years and the transition to adulthood. They found that redshirting by parent preference or school recommendation was not an effective strategy for improving high school achievement, graduation rates or college enrollment (Lincove and Painter, 2006). However, the researchers did find that older students, whether because of redshirting or birthday, were less likely to repeat kindergarten and subsequent grades. Yet delaying kindergarten for a year is not a guarantee that the child will avoid retention. It is because of results such as these that some critics have described academic redshirting as another form of retention (Frey, 2005, Kunder, May, and Brent, 1995, Lincove and Painter 2006).

## Season of Birth

Research has demonstrated that the achievement of children in early elementary school is related to their season of birth. Basically those born in summer typically perform poorly compared to those born in the fall (Clanton, Foels, and Martin, 2004). In addition, research has indicated that more children diagnosed with specific learning disabilities are born in the summer (Clanton, Foels, and Martin, 2004). A study conducted by Jones and Mandeville (1990),
investigated the association between age at school entry and reading failure in first, second, third and sixth grade. The sample included all children tested in the State of South Carolina in 1987 in the grades described above. Children were excluded if they had repeated a grade or had skipped a grade. Jones and Mandeville (1990) reported that the risk of failure was $13 \%$ to $58 \%$ higher for younger students (summer born children) than for older students, with the highest level of risk associated with the lower grades. Similar results were found by Graue and DiPerna (2000) in a study of more than 8000 students in Wisconsin. Their results indicated that nearly four times as many children were retained in the first through third grade if they were summer versus fall born (Graue and DiPerna, 2000).

## Costs of Retention

As illustrated above, retention has become a common practice; however, its costs and benefits are not easily calculated. Monetary costs are easily determined, but other costs are hard to assess because of the different variables that affect each student when retained. One obvious cost of grade retention is increased educational expenditures. In the mid-1980s, retention added approximately $\$ 10$ billion to the nation's school bill, on the basis of the average annual per pupil expenditures of $\$ 4,051$ and a national annual retention rate of $6 \%$ (Alexander, Entwisle, and Dauber, 2003). In addition, repeaters often receive extra services, including special education services which add to the price of retention (Alexander, Entwisle, and Dauber, 2003). If \$10 billion was a reasonable estimate in 1985, then the cost associated with retention today is well beyond $\$ 10$ billion because there are more students, retention rates are higher, per pupil expenditures are up, and extra services are more costly (Alexander, Entwisle, and Dauber, 2003). Basically, retaining approximately half of a districts student population once by $5^{\text {th }}$ grade is
roughly equal to increasing its elementary school population by $10 \%$, and the associated costs will almost certainly be more than 10\% (Alexander, Entwisle, and Dauber, 2003).

One cost of retention that is more difficult to calculate because it is a deferred cost is dropping out of high school. The research has shown that retention of a student in school is a major risk factor for high school dropout, increasing dropout odds in many studies two and threefold (Jimerson, 2001). Students who drop out of high school make approximately a third less than students who completed high school or received a general equivalency diploma (GED) (Alexander, Entwisle, and Dauber, 2003). Retention affects life after high school in other ways. For example, a study conducted by Royce, Darlington and Murray in 1983, reported that compared to similar students who had not repeated a grade, repeaters were more likely to be unemployed or not seeking work, to be living on public assistance, or to be in prison (cited by Alexander, Entwisle, and Dauber, 2003). The research has also shown a linkage between retention and subsequent imprisonment. About one half of prisoners in our jails are high school dropout (Alexander, Entwisle, and Dauber, 2003). In other words, the monetary cost of retention is only a small fraction of the long-term costs to the student and society. Last, there are also many psychological costs related to retention. Repeating a grade seems to increase children's adjustment problems in schools. When students are moved from grade to grade they generally keep the same peers, but retention separates students from their peers (Alexander, Entwisle, and Dauber, 2003). Research has demonstrated that when peer groups are disrupted, school performance also deteriorates (Alexander, Entwisle, and Dauber, 2003).

## Why Retention Continues

Generally speaking, research has not supported retention and suggested negative effects, so why are students still retained? Grade retention seems to hold an intuitive appeal despite a lack of empirical support. It also seems intuitively advantageous to retain a child earlier (e.g., by second grade) rather than later (e.g., third grade or later). According to Martinez and Vandergrift (1991) students are supposedly retained in early elementary grades to prevent future failure and retained in high school to prevent graduation by students who lack the basic skills necessary for post-high school success. Thus, retention before second grade is viewed as an early intervention or a preventative measure. Graue and DiPerna (2000) found that delayed entry into kindergarten led to academic skills consistent with peers, and early-retained students were more advanced than students who were retained in a later grade. These data supported early retention as prevention hypothesis, but a review of the literature did not reveal any studies that examined timing of retention, rather than retention compared to delayed entry.

Another trend in the rising retention rate is the use of high stakes test to determine if a students should be retained. Retention of the students has demonstrated large gains in districtwide test scores, encouraging many individuals to believe wrongly that the policy has been successful (Owens and Ranick, (1977), Holmes, (2006). When large numbers of students are retained in a grade, large numbers of children are compared the following year to a younger norm group. The next grade also scores higher because low scorers are kept back. Though district scores may go up, what is lost in these comparisons is what happens to individual children.

Teachers, parents, and administrators' attitudes toward retention also contribute to its continued use as an intervention strategy. Teachers usually make the recommendation to
promote or retain their students, with the final decision mitigated by varying input or pressure from parents and administrators (Kelly, 1999). Since teachers have this responsibility, it is important to identify and understand their attitudes on-and knowledge of-the subject.

## Social Promotion

The research has shown that retention is not the solution for students that are having difficulty mastering skills in a certain grade. Nevertheless, retention continues to be used as a response to educators and politicians fears about "social promotion," a policy for promoting students even when they have failed academically. Opponents of social promotion argue that it cheats the child of an education (ERIC Digest Number 161, 2000). They argue that children socially promoted through the early years invariably end up being retained in high school, a more damaging experience than early retention. They base their argument on studies that have shown that high school students are more vulnerable to change, as they are experiencing a lot of pressure going through the transition from adolescence to adulthood (ERIC Digest Number 161, 2000). Opponents of social promotion argue that it has the following additional negative impacts:
(ERIC Digest Number 161, 2000)

- Students who are promoted cannot do the work
- Students who are promoted will have many failures in the high school years which will most likely lead to dropping out
- It sends the message to all students that they can get by without working hard
- It forces teachers to deal with under-prepared students while trying to teach the prepared
- It gives parents a false sense of their children's progress (ERIC Digest Number 161, 2000)

Opponents of "no social promotion" policies do not defend social promotion so much as say that retention is even worse. They argue that retention is not a cost-effective response to poor performance when compared to cheaper or more effective interventions, such as additional tutoring and summer school. They point to a wide range of research findings that show no advantage to, and even harm from, retention, and the tendency for gains from retention to wash out (Brooks, 2002; Denton, 2001; Jimerson, Anderson, 2002; Whipple, 2002).

According to Angela Rudolph (1999), "Alternatives to Social Promotion and Grade Retention," the review of current literature states two consistent themes regarding the effects of both social promotion and grade retention. First, social promotion has a negative effect on student achievement. It guarantees failure by neglecting to develop students’ skills for future studies and employment. In addition, Rudolph states grade retention has a negative effect on student achievement, classroom behavior, attitude toward school, and school attendance. Rudolph (1999) has found that both social promotion and grade retention are inadequate responses to low student achievement because they are not preventative.

## Florida State Statute 1008.25

The following section of the literature review addresses Florida State Statute 1008.25, specifically how it relates to student progression in the State of Florida. In the state of Florida Statute 1008.25 states, "It is the intent of the Legislature that each student's progression from one grade to another be determined, in part, upon proficiency in reading, writing, science, and mathematics; that district school board policies facilitate such proficiency; and that each student and his or her parent be informed of that student's academic progress." It specifically addresses social promotion, "No student may be assigned to a grade level based solely on age or other
factors that constitute social promotion." In relation to retention, the statute states, "Beginning in 2002-2003 school year, if the student's reading deficiency, is not remedied by the end of grade 3, as demonstrated by scoring at Level 2 or higher on the statewide assessment test in reading for grade 3, the student must be retained (Florida State Statute 1008.25)." It goes on to say, "Students retained under the provisions must be provided intensive interventions in reading to ameliorate the student's specific reading deficiency, as identified by a valid and reliable diagnostic assessment. This intensive intervention must include effective instructional strategies, participation in the school district's summer reading camp, and appropriate teaching methodologies necessary to assist those students in becoming successful readers, able to read at or above grade level, and ready for promotion to the next grade. (Florida State Statute 1008.25)"

## Seminole County Student Progression Plan

The 2007-2008 Seminole County Student Progression Plan identifies the following areas to be used to determine student progress:

- Overall student performance on state/district curriculum content is based on proficiency and satisfactory completion of the district-adopted textbooks and supplemental materials approved for the assigned grade level and district and state assessments.
- The evaluation of each student's progress must be based upon the student's classroom work, observations, tests, district and state assessments, and other relevant information.
- Promotion, assignment, and retention are based on documentation of student performance (Seminole County Student Progression Plan).

The following grade level charts list the indicators used to assess Seminole County Public Schools' students in each content area and the district-determined proficiency levels for
promotion, assignment, and retention on those indicators (Seminole County Student Progression Plan).

## Alternatives to Retention

If neither retention nor social promotion works, the question is "What are the Alternatives?" There are many alternative strategies and programs being used in many school systems with successful results. These alternative strategies and programs often incorporate research-based, best practice principles (Protheroe, 2007). A few examples of the different alternatives are: mandatory summer school, one-on-one tutoring, after-school programs, and comprehensive, school-wide reforms (Kelly, 1999). In addition, smaller classroom size and one-on-one or small group supplemental instruction have been shown to be successful (Alexander, Entwisle, and Kabbani, 2000). Schools can also adopt research-based programs, give teachers more time to collaborate with one another, help, and support new teachers and recruit more qualified teachers (Ormond 2001). According to Denton (2001), the following are additional successful alternatives:

- Identify student problems as early as possible in the school year instead of waiting until an entire year is lost
- Intervene as soon as problems are identified to provide struggling students with the extra time and help they need
- Design the extra help around each student's individual needs-"cookie-cutter" solutions rarely work
- Have strong quality controls and monitoring to ensure that the extra help and time are working

However, it is not that simple: Providing struggling students with the right kinds and amounts of extra help during the school year is more complicated and demanding than promoting or retaining these students. Jimerson, Kerr, Pletcher (2005) suggest that school administrators advocate for promotion plus policies that depend on effective, evidence-based interventions and change programs in ways that provide intensive, focused help for low achieving students. Targeted interventions are very important for students who are failing academically.

One very important strategy for schools to employ, especially since the emphasis on standards and accountability, is to make sure that instructions and standards are aligned (Protheroe, 2007). Schools and districts that did it discovered that redesigned curriculum and instruction had a very positive impact on low performing students. For example, a study of California schools found that schools, which implemented a coherent, standard based instructional program, did a better job educating low-income students (Williams, 2005).

Another very important strategy is using data to guide instruction. The Education Trust (2005) showed differences in the ways in which schools with positive achievement success with struggling students used assessment data. The schools used continuous progress monitoring assessments to catch students before they fell too far behind. Some schools created intervention teams to study data about individual students and then developed learning plans for the students similar to the individualized education plans (IEP) used with special education (The Education Trust, 2005).

Another alternative strategy is changing grouping practices - that is, moving towards an increased use of multiage classrooms. In such classrooms, students of different ages and ability levels are grouped together, without dividing them or the curriculum into steps labeled by grade
(Protheroe, 2007). The multi-age classroom enables the students to make continuous progress rather than being promoted once a year or being required to wait until the next school year to move forward in the curriculum (Protheroe, 2007).

Also an important alternative aimed at improving academic success for struggling students is the idea of having students participate in "double dose" periods of reading and math. This strategy provides struggling students with the important remediation needed and assists the students in keeping up with their regular education peers (Protheroe, 2007).

An approach taken by many schools to help struggling students is the provision of supplemental instructional time through after-school, weekend, or summer programs. Summer school is an example of an alternative program that can be leveraged instead of retention. There is substantial evidence that a high-quality summer school can help bring many struggling students up to grade level (Denton 2001). Studies conducted in North Carolina provide strong evidence that summer school can make a positive difference for students that are below grade level. Among students who were not promoted at the end of the 1997 to 1998 school year in North Carolina, 71 percent of those who attended summer school were able to move to the next grade (Denton, 2001). In contrast, less than a third of the students who had been recommended for retention attended summer school (Denton, 2001). A comprehensive evaluation of students who attended the Chicago Public Schools' Summer Bridge Program found test score gains among all third, sixth, and eighth graders, with gains larger for sixth and eight graders. Third and sixth graders received 90 hours of instruction by attending summer school three hours per day for six weeks. Eighth graders received 140 hours of instruction attending four hours per day for seven weeks (Roderick, Engel, and Nagaoka, 2003).

Researchers have identified important factors that must be in place for summer school to be successful. The most critical factor in making summer school useful is making it different (Denton, 2001). A crash course that uses the same materials and methods that previously did not work for students is unlikely to create the positive gains in student performance (Denton, 2001). There should be careful assessment of individual student needs, with instruction designed to address them (Protheroe, 2007). Like all strategies to help struggling students before they are retained, summer school programs must be based on analyses of individual student's needs, and methods and materials must be selected carefully to match those needs (Denton, 2001). In addition, it is very important that the summer school staff possess instructional strategies that support their work with students who are experiencing difficulties with school day work (Protheroe, 2007). Lastly, according to Denton (2001), to ensure that summer school has a lasting impact on student performance, it is very important that the school, the students, and the student's family do not view it as an end product. Students who have experienced problems and have begun to overcome them in summer school need continued attention to make sure that, during the next school year, they do not lose ground they have gained (Denton, 2001).

Another opportunity to use an alternative program is during the school year. Students that are retained are not always a full year behind (Denton, 2001). It is more beneficial to provide kids with more learning time during the school year. In fact, a growing number of schools are stepping in with extra help in the form of one-on-one tutoring programs. One of the best-known programs is Reading Recovery, a preventive program that works with students in the bottom 20 percent of the class (Kelly, 1999). Ohio State University's Gay Su Pinnel found that Reading Recovery is an excellent alternative to retention. He believes we should think about reducing retention before it reaches the point of having to retain students (Kelly, 1999).

Denton (2001) suggests two examples of alternative programs. First, flexible scheduling during the school day targeted at the area of need. Flexible scheduling can allow one group of students to receive extra help from the teacher in a skill they are having trouble with, while the other students are able to move on or work on other skills. In addition, he proposes extra time programs before and after school and on Saturdays to supplement regular classroom instruction. These types of programs do not require missing regular classroom time (Denton, 2001).

After-school programs are also very popular. An after-school program that has seen great success rates is the Exemplary Center for Reading Instruction (ECRI) based in Salt Lake City (Kelly, 1999). This program employs teachers who, as tutors after school, use a variety of instructional methods in an attempt to reach all learners (Kelly, 1999). In a study of students in grades two through seven in Tennessee, researchers found ECRI students significantly outperformed those in the control group on the Stanford Achievement Test in reading comprehension and vocabulary. In addition, in North Carolina, administrators were able to track a 20 percent drop in retention over a two-year period for students using the ECRI program (Kelly, 1999).

Another alternative for schools is to put in place school wide programs. Research suggests that "Success for All," a program founded by Robert Slavin, can have a significant impact (Kelly, 1999). A study in the Baltimore schools found $1^{\text {st }}$ grade students were about three months ahead of matched control students in reading when following the program. By the time they reached $5^{\text {th }}$ grade, they scored a full grade level higher (Kelly, 1999). Slavin, who is based at Johns Hopkins, found that the problem with simply tutoring is you can't tutor everybody. With a school wide program you are serving a much larger number of kids (Kelly, 1999)."

There is clearly no one perfect intervention that will effectively address the specific needs of all low achieving students. The research has consistently pointed to the use of evidence-based interventions that facilitate the academic and socio-economic development of low achieving students. Algozzine, Ysseldyke, and Elliott (2002) provide a review of research-based strategies for effective instruction, and Shinn, Walker, and Stoner (2002) provide more review of interventions for academic and behavior problems. The following are simple alternatives to grade retention and social promotion:

- Parent involvement through frequent contact with teachers, supervision of homework, and continual communication about school progress.
- Age-appropriate and culturally sensitive instructional strategies to accelerate progress in the classroom.
- Systematic assessment strategies, such as continual progress monitoring and formative evaluations.
- Reading programs that provide developmentally appropriate, intensive, and direct instruction strategies to promote the reading skills of low performing students.
- School based mental health programs that promote the social and emotional adjustment of children.
- Student support teams with appropriate professionals to assess and identify specific learning or behavior problems, design interventions to address those problems, and evaluate the efficacy of those interventions (Algozzine, Ysseldyke, and Elliott, 2002 and Shinn, Walker, and Stoner, 2002).

It is important to add that the literature indicates that effective practices for at-risk students tends to be very similar to the best practices of general education but are at a more intense individual level (Jimerson, Kerr, and Pletcher, 2005).

## Factors to Consider When Retention is Recommended

When students are retained, it may affect them for the rest of their life. It is a decision that has both short and long-term impact on both the retained student and the student's family. It is extremely important to look at the whole child when making a decision on retention. There are a variety of factors and circumstances that impact a student's success in school. This last section of the literature review will look at these individual circumstances and what the research says about retaining a student that falls into the following categories: students that are low functioning (70 to 89 IQ), students with a learning disability, students with a poor attendance record, and students with a high transient rate.

According to Grant and Richardson (1998), the needs of a student that has a low IQ are best met by promoting the student to the next grade. Retaining a slower learner usually produces disappointing outcomes and may result in having an older, larger student in a classroom surrounded by younger, smaller, outperforming classmates (Grant and Richardson, 1998). In addition to promoting the student, it is very important to provide appropriate support for the student throughout the school year. Both accommodations to the curriculum and intense intervention classes would be beneficial. The goal of the interventions is for the student to reach his or her personal academic achievement level without retention (Grant and Richardson, 1998).

The next category consists of students that have been diagnosed with a specific learning disability or students that the teachers and or parents think have a learning disability. If a student
has been identified with a learning disability and does not show any signs of being developmentally young, then promotion to the next grade with accommodations are recommended (Grant and Richardson, 1998). A study conducted by Barnett (1996) explored the rates of grade retention among children with undiagnosed learning disabilities. She discovered that around $72 \%$ of students with learning disabilities were retained at least once before they were referred for special education evaluation (Barnett, 1996). Retained learning-disabled students were significantly older than non-retained learning-disabled students when they were referred for evaluation. A one-year delay in age of referral between retained and non-retained LD students suggested that teachers and administrators were using retention to try to remediate children's learning problems (Barnett, 1996). The overall rate of retention of LD students in Barnett's study (1996) was $71.6 \%$ which is much higher than the $11 \%$ to $19 \%$ national retention rates. The impact of retaining LD students is high in terms of time, effort, financial resources, and the children's academic and social development. Instead of retention, the use of individualized assistance, tutorial programs, and specialized intervention programs are preferred (Barnett, 1996).

Another group commonly retained is students with a high absenteeism rate. Retaining a student solely because of high absenteeism is a dangerous practice. These students are already at risk to become school dropouts; retaining them may only increase the risk that they will not finish high school (Grant and Richardson, 1998). Students who move three or more times in five years—transient students—are not good candidates for retention. The serious problem of high mobility rate for students cannot be solved through retention. Like students who are absent a lot, transient students have special circumstances and are prone to drop out of school, tend to be poorly adjusted at school, have poor academic performance, and often require special education
services (Grant and Richardson, 1996). It is more beneficial for these students to be promoted to the next grade level and to be given the appropriate support services that match their unique learning problems (Grant and Richardson, 1996).

# CHAPTER 3 METHODOLOGY 

## Introduction

The purpose of this chapter is to describe the methods and procedures used in the collection and analysis of data for this study. The sections of this chapter are organized as follows: problem statement, research questions, population and databases, analytical procedures and summary.

## Problem Statement

Retention of students having academic difficulties has become a very popular intervention. Furthermore, since the inception of NCLB, retention of students in Florida who have not shown mastery of specific benchmarks through high stakes tests, specifically the Florida Comprehensive Assessment Test (FCAT) beginning in grade three, has added to the already high number of retentions. The main problem facing educators is that this high use of retentions is not being accompanied by a thorough process to determine (a) if the retention of the student is necessary and sufficient, and (b) after the intervention, whether it was successful, and if it was not successful, how to best intervene again. This study, based on an analysis of Seminole County Schools data on student retentions, makes some recommendations that may contribute to the eventual solution of the problem.

Most studies suggest that retention of students does not improve students' academic success or their social and emotional attitude towards school. Specifically, much of the research has shown that students who were retained had short-lived gains and eventually fell behind again (Brooks, 2002; Denton, 2001; Jimerson, Anderson, 2002; Whipple, 2002). The studies found that
students who were retained were more likely to display aggressiveness, to have a history of suspension or expulsion, to act out in the classroom, or to display behaviors associated with Attention Deficit Hyperactivity Disorder and Conduct Disorder (Brooks, 2002; Denton, 2001; Jimerson, Anderson, 2002; Whipple, 2002). Many studies also indicated that children who qualify for Exceptional Student Education (ESE) are also more likely to be retained (Brooks, 2002; Denton, 2001; Jimerson, Anderson, 2002; Whipple, 2002). One of the most important trends that the research discovered is that retention at any grade level is associated with future high school dropout rates (Alexander, Entwisle, Kabbanini, 2003).

Although the research is almost unanimous in its criticism of retention as an intervention, the practice of retaining students is not coming to an end in the foreseeable future. Therefore, this paper tried to find patterns in the data from which improvements to the retention process could be derived. Of course, most of the results from the analyses of the data support the criticisms.

## Research Questions

The following questions were developed to verify results from the literature and to find patterns that could lead to recommendations.

1. How many Seminole County students have one or more retentions?

This question addresses the magnitude of the problem. In other words, if retaining students was a problem, how serious was Seminole County's problem?
2. What percent of students at each Seminole County School have been retained at least once?

The purpose of this question was two-fold. First, does the percentage of retained students noticeably vary from one school to another? And second, if they do, what known factors about
the schools may explain the discrepancies? Is it socioeconomic status of the children, size, or principal's attitude towards retention?
3. To what extent are students retained in some grades more than in others?

The current implementation of NCLB in Florida has made retention of third graders mandatory, if the students do not score well on the FCAT tests. In addition, mandatory retentions, based on total credits, occur in the ninth through twelfth grades. This question examines whether a high number of retentions are only occurring in these mandatory retention grades or are they also occurring in other grades.
4. To what extent are some categories of students retained more than others?

Previous studies have found that certain categories of students have higher rates of retention. This question examines if these findings apply to Seminole County.
5. How did students retained in previous years score on the 2006-2007 FCAT Reading and Math tests?
6. How do students retained in the 3rd grade for the first time do on the FCAT Reading and Math tests in later grades?

Questions five and six examine claims by critics of retention that gains from retention are shortlived. The first one looks at how students that have ever been retained are doing now. Are they doing better in some grades? The second one is more specific, it looks at the students’ performance in the years after their $3{ }^{\text {rd }}$ grade retention.
7. How did the different categories of students previously retained in the primary grades score on the 2006-2007 $3^{\text {rd }}$ grade FCAT Reading and Math tests?

The purpose of this question is to measure how each student category performed after retention in the primary grades, in order to develop the profile of a student that will be successful after retention.

## Population and Databases

The population of this study included all students enrolled in Seminole County Public Schools at the end of the 2006-2007 school year. Information on this population, available in the form of two databases, was used to answer the research questions.

Database-1. This database contained information on all students enrolled in the Seminole County Public School System. It includes data on students enrolled at the end of the 2006-2007 school year at 37 elementary schools, 12 middle schools, and 10 high schools.

Database-2. This database, a subset of Database-1 at the end of this summer (August, 2007), contained information on students that have been retained at least once during their educational career. For each of the 10,875 students that qualified, the following information from Database-2 was entered into SPSS: gender (M or F), date of birth, current grade (Kg-12), race (White, Black, Hispanic, American Indian, Multiracial or Asian), ESE status (None, Language Impaired, Specific Learning Disability or Other), ELL status (Yes or No), SES (Do Not Apply, Free Lunch, Reduced Lunch, Title I), first retention school year, first retention grade, second retention school year, second retention grade, third retention school year, third retention grade and the FCAT Reading Scale Score, FCAT Reading Developmental Scale Score, FCAT Reading Level, FCAT Math Scale Score, FCAT Math Developmental Scale Score, FCAT Math Level for the current grade (i.e., scores at the end of the 2006-2007 year). Note that some of these fields
divide the students into categories: specifically, gender, age, race, grade retained, ESE status, ELL status, and SES.

## Analytical Procedures

Electronic Student Performance Profile (ESPP) data queries of Database-1 and SPSS procedures of selected sets of information from the SPSS version of Database-2 were used to answer each of the research questions. The fifth, sixth, and seventh research questions focused on comparing the mean FCAT Reading and Math Scale Scores to the Level 3 minimum Scale Scores determined by the Department of Education. The Level 3 minimum Scale Scores were used because students that score within the Level 3 Scale Score range for their grade are said to have partial success with the content on the FCAT and are considered to meet grade level expectations. The comparisons were made using One-sample T Test SPSS procedures. Each mean FCAT score was considered significantly higher or lower than the minimum, if the minimum fell outside a 95\% confidence interval about the mean. These significant values may be used to predict mean scores by similar samples of students in the future. Means that were not significantly higher or lower than the minimum describe accurately the scores of the samples, but are not statistically accurate enough to predict future performance by other samples of students.

To answer research question one, three SPSS Frequency procedures were run to determine the number of students retained once, twice, and finally three times in Seminole County Schools.

To answer research question two, an ESPP data query was used to obtain, from Database1 , the number of previously retained students and the total number of students at each school.

To answer research question three, three SPSS Frequency procedures were run to determine the number of students retained for the first, second and third time in each grade at the end of the 2006-2007 school year.

To answer research question four, two SPSS Frequency procedures were run. The first procedure provided the number of students by student category for all students in Database-2; while the second procedure provided the number of students by student category for students retained at the end of the 2006-2007 school year.

To answer research question five and test hypothesis one, sixteen SPSS One-Sample T Test procedures were conducted. The procedures compared the mean FCAT Reading and Math scores of third through tenth grade students retained one or more times before the 2006-2007 school year to the Florida Department of Education minimum Level 3 Scale Score. Table 2 and 3 below contain the FCAT Reading and Math Scale Scores for each grade beginning in third (Florida Department of Education, 2006).

Table 2: FCAT Reading Scale Scores

| FCAT Reading Scale Scores |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| $\mathbf{3}$ | $100-258$ | $259-283$ | $284-331$ | $332-393$ | $394-500$ |
| $\mathbf{4}$ | $100-274$ | $275-298$ | $299-338$ | $339-385$ | $386-500$ |
| $\mathbf{5}$ | $100-255$ | $256-285$ | $286-330$ | $331-383$ | $384-500$ |
| $\mathbf{6}$ | $100-264$ | $265-295$ | $296-338$ | $339-386$ | $387-500$ |
| $\mathbf{7}$ | $100-266$ | $267-299$ | $300-343$ | $344-388$ | $389-500$ |
| $\mathbf{8}$ | $100-270$ | $271-309$ | $310-349$ | $350-393$ | $394-500$ |
| $\mathbf{9}$ | $100-284$ | $285-321$ | $322-353$ | $354-381$ | $382-500$ |
| $\mathbf{1 0}$ | $100-286$ | $287-326$ | $327-354$ | $355-371$ | $372-500$ |

Table 3: FCAT Math Scale Scores

| FCAT Mathematics Scale Scores |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| $\mathbf{3}$ | $100-252$ | $253-293$ | $294-345$ | $346-397$ | $398-500$ |
| $\mathbf{4}$ | $100-259$ | $260-297$ | $298-346$ | $347-393$ | $394-500$ |
| $\mathbf{5}$ | $100-287$ | $288-325$ | $326-354$ | $355-394$ | $395-500$ |
| $\mathbf{6}$ | $100-282$ | $283-314$ | $315-353$ | $354-390$ | $391-500$ |
| $\mathbf{7}$ | $100-274$ | $275-305$ | $306-343$ | $344-378$ | $379-500$ |
| $\mathbf{8}$ | $100-279$ | $280-309$ | $310-346$ | $347-370$ | $371-500$ |
| $\mathbf{9}$ | $100-260$ | $261-295$ | $296-331$ | $332-366$ | $367-500$ |
| $\mathbf{1 0}$ | $100-286$ | $287-314$ | $315-339$ | $340-374$ | $375-500$ |

Florida Department of Education (2006)

To answer research question six and hypothesis two, sixteen SPSS One-Sample T Test procedures were conducted. The procedures compared the mean FCAT Reading and Math scores of third through tenth grade students retained in third grade before the 2006-2007 school year to the Florida Department of Education minimum Level 3 Scale Score.

To answer research question seven and hypothesis three, for eighteen student categories of current third grade students, two SPSS One-Sample T Test procedures were conducted. The procedures compared the mean third grade FCAT Reading and Math scores of the students to the Florida Department of Education minimum Level 3 Scale Score.

## Summary

Chapter 3 described the general methodological approach, research setting, population, data gathering instrument, and analytical procedures to be employed. Chapters 4 and 5 contain the data analysis, findings of the data analysis, a discussion of the quantitative data gathered, and the implications of the results of this study for further research.

## CHAPTER 4 DATA ANALYSIS

This study determined whether elementary and secondary school students who were retained are currently having academic success, based on their latest FCAT scores in reading and mathematics, in their current grade. Additionally, the study looked in detail at the number of and success of students in the categories of gender, age, race, grade retained, ESE status, ELL status, and SES.

This chapter is divided into the following eight sections: Population and Databases, Research Question 1, Research Question 2, Research Question 3, Research Question 4, Research Question 5 and Hypothesis One, Research Question 6 and Hypothesis Two, and Research Question 7 and Hypothesis Three.

## Population and Databases

The population of this study included all students enrolled in Seminole County Public Schools at the end of the 2006-2007 school year. Information on this population, available in the form of two databases, was used to answer the research questions.

Database-1. This database contained information on all students enrolled in the Seminole County Public Schools System. The database varied from day to day, as students enrolled and withdrew from the system. The table 4 below describes current (2007-2008 school year) enrollment at Seminole County Public Schools.

Table 4: Seminole County Public Schools Descriptive Statistics of the Whole Population (Database-1)

| Total Students |  | 62,417 | 100.0\% |
| :---: | :---: | :---: | :---: |
| Students by Race | White | 38,553 | 58.6\% |
|  | Black | 8,647 | 13.0\% |
|  | Hispanic | 11,595 | 18.0\% |
|  | American Indian | 152 | 0.2\% |
|  | Multiracial | 3,725 | 5.0\% |
|  | Asian | 2,423 | 3.0\% |
| Students by SES | Do Not Apply | 44,425 | 69.1\% |
|  | Free | 10,291 | 16.0\% |
|  | Reduced | 5,206 | 8.1\% |
|  | Title I | 4,367 | 6.8\% |
| Students by ELL | ELL Students | 2,679 | 4\% |
|  | Non-ELL Students | 59,738 | 96\% |
| Students by ESE | Language Impaired | 2,661 | 4.1\% |
|  | SLD | 4,264 | 6.6\% |

Database-2. This database, a subset of Database-1 at the end of this summer (August, 2007), contained information on students who have been retained at least once during their educational career. Selected sets of information from Database-2 were used to answer each of the research questions.

## Research Question 1

How many Seminole County students have one or more retentions?

A frequency analysis of Database-2 yielded the following results: 10,785 (100\%) students have one or more retentions, 1514 (14\%) students have two or more retentions, and 184 (2\%) students have three or more retentions.

## Research Question 2

What percent of students at each Seminole County School have been retained at least once?

From Database-1, at the end of the 2006-2007 school year, the number of students with at least one retention in each school was determined. There is a small discrepancy with the totals in question one that was caused by student withdrawals from the system during the summer. The following table, Table 5, contains the numbers and percent of students retained at each elementary, middle and high school in Seminole County.

Table 5: Percentage of Retained Students at each Seminole County School

| Level | School | Retained Students | Total Students | Percent of Student Retained |
| :---: | :---: | :---: | :---: | :---: |
| Elem. | Altamonte | 132 | 714 | 18\% |
| Elem. | Bear Lake | 124 | 956 | 13\% |
| Elem. | Bentley | 186 | 944 | 20\% |
| Elem. | Carillon | 101 | 719 | 14\% |
| Elem. | Casselberry | 134 | 675 | 20\% |
| Elem. | Crystal Lake | 108 | 655 | 16\% |
| Elem. | Eastbrook | 100 | 717 | 14\% |
| Elem. | English Estates | 133 | 648 | 21\% |
| Elem. | Evans | 95 | 770 | 12\% |
| Elem. | Forest City | 137 | 683 | 20\% |
| Elem. | Geneva | 112 | 494 | 23\% |
| Elem. | Goldsborough | 185 | 628 | 29\% |
| Elem. | Hamilton | 199 | 742 | 27\% |
| Elem. | Heathrow | 97 | 960 | 10\% |
| Elem. | Highlands | 119 | 456 | 26\% |
| Elem. | Idyllwilde | 240 | 744 | 32\% |
| Elem. | Keeth | 85 | 713 | 12\% |
| Elem. | Lake Mary | 96 | 604 | 16\% |
| Elem. | Lake Orienta | 123 | 596 | 21\% |
| Elem. | Lawton | 123 | 774 | 16\% |
| Elem. | Layer | 122 | 542 | 23\% |
| Elem. | Longwood | 113 | 564 | 20\% |
| Elem. | Midway | 96 | 372 | 26\% |
| Elem. | Partin | 51 | 722 | 7\% |
| Elem. | Pinecrest | 227 | 725 | 31\% |
| Elem. | Rainbow | 82 | 831 | 10\% |
| Elem. | Red Bug | 121 | 764 | 16\% |
| Elem. | Sabal Point | 47 | 730 | 6\% |
| Elem. | Spring Lake | 151 | 688 | 22\% |
| Elem. | Stenstrom | 88 | 657 | 13\% |
| Elem. | Sterling Park | 99 | 555 | 18\% |
| Elem. | Walker | 129 | 815 | 16\% |
| Elem. | Wekiva | 79 | 796 | 10\% |
| Elem. | Wicklow | 261 | 753 | 35\% |
| Elem. | Wilson | 163 | 892 | 18\% |
| Elem. | Winter Springs | 122 | 538 | 23\% |
| Elem. | Woodlands | 118 | 710 | 17\% |
| Middle | Chiles | 157 | 1356 | 12\% |
| Middle | Greenwood Lakes | 163 | 1064 | 15\% |
| Middle | Indian Trails | 169 | 1326 | 13\% |


| Level | School | Retained <br> Students | Total <br> Students | Percent of Student Retained |
| :--- | :--- | :--- | :--- | :--- |
| Middle | Jackson Heights | 120 | 1282 | $9 \%$ |
| Middle | Markham Woods | 133 | 997 | $13 \%$ |
| Middle | Millennium | 268 | 1563 | $17 \%$ |
| Middle | Milwee | 215 | 1563 | $14 \%$ |
| Middle | Rock Lake | 107 | 1050 | $10 \%$ |
| Middle | Sanford | 209 | 1368 | $15 \%$ |
| Middle | South Seminole | 215 | 1149 | $19 \%$ |
| Middle | Teague | 208 | 1524 | $14 \%$ |
| Middle | Tuskawilla | 182 | 1070 | $17 \%$ |
| High | Crooms | 45 | 576 | $8 \%$ |
| High | Hagerty | 111 | 1587 | $7 \%$ |
| High | Lake Brantley | 567 | 3005 | $19 \%$ |
| High | Lake Howell | 314 | 2354 | $13 \%$ |
| High | Lake Mary High | 395 | 2462 | $16 \%$ |
| High | Lyman | 465 | 2437 | $19 \%$ |
| High | Oviedo | 330 | 2336 | $14 \%$ |
| High | Seminole | 609 | 3295 | $18 \%$ |
| High | Winter Springs | 358 | 2418 | $15 \%$ |

## Research Question 3

To what extent are students retained in some grades more than in others?
A frequency analysis of Database-2 yielded the number of students retained in each grade at the end of the 2006-2007 school year. The results are displayed in Tables 6-8. Note that 2162 students were retained for the first time, 529 were retained for the second time, and 96 were retained for the third time during the 2006-2007 school year. Ninth grade had the largest amount of retentions in each of the three categories with 402 (18.6\%), 121 (22.9\%) and 30 (31.2\%) respectively. After $9^{\text {th }}$ grade, $1^{\text {st }}$ grade with 326 (15\%), and Kindergarten with 256 (11.8\%) have the highest number of first retentions. The number of second retentions is once again
concentrated in $9^{\text {th }}$ with $121(22.9 \%)$ followed by $10^{\text {th }}$ with $88(16.6 \%)$ and $3^{\text {rd }}$ grade with 68 (12.9\%).

Table 6: Seminole County Distribution of Grades for $1^{\text {st }}$ Retentions—2006-2007 School Year

| Grade | Frequency | Percent |
| :--- | ---: | ---: |
| kg | 256 | 11.8 |
| 1 | 326 | 15.1 |
| 2 | 127 | 5.9 |
| 3 | 164 | 7.6 |
| 4 | 46 | 2.1 |
| 5 | 14 | .6 |
| 6 | 83 | 3.8 |
| 7 | 115 | 5.3 |
| 8 | 68 | 3.1 |
| 9 | 402 | 18.6 |
| 10 | 256 | 11.8 |
| 11 | 165 | 7.6 |
| $\mathbf{1 2}$ | 140 | 6.5 |
| Total | $\mathbf{2 1 6 2}$ | $\mathbf{1 0 0 . 0}$ |

Table 7: Seminole County Distribution of Grades for $2^{\text {nd }}$ Retentions—2006-2007 School Year

| Grades | Frequency | Percent |
| :--- | ---: | ---: |
| Kg | 0 | 0 |
| 1 | 15 | 2.8 |
| 2 | 18 | 3.4 |
| 3 | 68 | 12.9 |
| 4 | 8 | 1.5 |
| 5 | 1 | .2 |
| 6 | 35 | 6.6 |
| 7 | 36 | 6.8 |
| 8 | 25 | 4.7 |
| 9 | 121 | 22.9 |
| 10 | 88 | 16.6 |
| 11 | 54 | 10.2 |
| $\mathbf{1 2}$ | 60 | 11.3 |
| Total | $\mathbf{5 2 9}$ | $\mathbf{1 0 0}$ |

Table 8: Seminole County Distribution of Grades for $3^{\text {rd }}$ Retentions—2006-2007 School Year

| Grade | Frequency | Percent |
| :--- | ---: | ---: |
| Kg, 1, 2 | 0 | 0 |
| 3 | 1 | 1.0 |
| 6 | 6 | 6.2 |
| 7 | 8 | 8.3 |
| 8 | 6 | 6.2 |
| 9 | 30 | 31.2 |
| 10 | 24 | 25.0 |
| 11 | 11 | 11.5 |
| 12 | 10 | 10.4 |
| Total | $\mathbf{9 6}$ | $\mathbf{1 0 0 . 0}$ |

## Research Question 4

To what extent are some categories of students retained more than others?
One or more frequency analyses of subsets of student records from Database- 2 were conducted for each of the categories of gender, age, race, ESE program, ELL program, and socioeconomic status (SES).

## Gender

The frequency of males being retained in Seminole County is greater than females. The first frequency analysis yielded that out of a total of 10,785 retained students, 6471(60\%) of the students are male and 4314 (40\%) of the students are female. The results are displayed in Table 9.

Table 9: All Seminole County Students Gender Retention Frequency

|  | Frequency | Percent |
| :--- | ---: | ---: |
| Females | 4314 | 40.0 |
| Males | 6471 | 60.0 |
| Total | $\mathbf{1 0 7 8 5}$ | $\mathbf{1 0 0 . 0}$ |

The second frequency analysis consisted of a cross tabulation by gender and current grade of students retained during the 2006-2007 school year. The percent of males and females retained was almost identical to the values for the entire population in Database-2 with 1674 (60.1\%) of males and 1113 (39.9\%) of females being retained. The results in Table 10 also illustrate the large difference between the number of males and females that were retained in

Kindergarten, Fifth, Sixth, Seventh and Eighth grade. In these grades the percentage of boys was considerably greater than 60\%.

Table 10: Seminole County 2006-2007 Grade Retained/Gender Frequency


| Current Grade * Gender Cross Tabulation |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Gender |  | Total |
| Grade |  | F | M |  |
| kg | Count | 89 | 167 | 256 |
|  | \% within Current Grade | 34.8\% | 65.2\% | 100.0\% |
| 1 | Count | 145 | 196 | 341 |
|  | \% within Current Grade | 42.5\% | 57.5\% | 100.0\% |
| 2 | Count | 62 | 83 | 145 |
|  | \% within Current Grade | 42.8\% | 57.2\% | 100.0\% |
| 3 | Count | 107 | 126 | 233 |
|  | \% within Current Grade | 45.9\% | 54.1\% | 100.0\% |
| 4 | Count | 24 | 30 | 54 |
|  | \% within Current Grade | 44.4\% | 55.6\% | 100.0\% |
| 5 | Count | 3 | 12 | 15 |
|  | \% within Current Grade | 20.0\% | 80.0\% | 100.0\% |
| 6 | Count | 34 | 90 | 124 |
|  | \% within Current Grade | 27.4\% | 72.6\% | 100.0\% |
| 7 | Count | 53 | 106 | 159 |
|  | \% within Current Grade | 33.3\% | 66.7\% | 100.0\% |
| 8 | Count | 35 | 64 | 99 |
|  | \% within Current Grade | 35.4\% | 64.6\% | 100.0\% |
| 9 | Count | 222 | 331 | 553 |
|  | \% within Current Grade | 40.1\% | 59.9\% | 100.0\% |
| 10 | Count | 141 | 227 | 368 |
|  | \% within Current Grade | 38.3\% | 61.7\% | 100.0\% |
| 11 | Count | 96 | 132 | 228 |
|  | \% within Current Grade | 42.1\% | 57.9\% | 100.0\% |
| 12 | Count | 102 | 110 | 212 |
|  | \% within Current Grade | 48.1\% | 51.9\% | 100.0\% |
|  | Count | 1113 | 1674 | 2787 |
|  | \% within Current Grade | 39.9\% | 60.1\% | 100.0\% |

## Age

A frequency analysis was conducted of those students retained at the end of the 20062007 school year. Table 11 illustrates the results. The birth months with the highest concentration of retention were the following: August with 275 (9.9\%), July with 272 (9.8\%), April with 249 (8.9\%) and June with 246 (8.8\%). The month of November with 203 (7.3\%) had the fewest number of retentions.

Table 11: Seminole County 2006-2007 Retained Students Birth Month Frequency

| Month | Frequency | Percent |
| :--- | ---: | ---: |
| January | 218 | 7.8 |
| February | 219 | 7.9 |
| March | 221 | 7.9 |
| April | 249 | 8.9 |
| May | 231 | 8.3 |
| June | 246 | 8.8 |
| July | 272 | 9.8 |
| August | 275 | 9.9 |
| September | 218 | 7.8 |
| October | 216 | 7.8 |
| November | 203 | 7.3 |
| December | 219 | 7.9 |
| Total | $\mathbf{2 7 8 7}$ | $\mathbf{1 0 0 . 0}$ |

Two frequency analyses were conducted to determine the amount of retentions based on the month a student was born for all the students in Database-2 that were retained for the first time in kindergarten or first grade. Tables 12 and 13 below illustrate the results. The birth months with the highest concentration of retention were the following: August with 360 (18.4\%)
and 278 (11.7\%) respectively, July with 236 (12.1\%) and 265 (11.1\%) respectively and June with 244 (12.5\%) and 245 (10.3) respectively. The month of September with 85 (4.4\%) and 139 (5.8\%) respectively had the fewest number of retentions.

Table 12: All Seminole County Students Retained in Kindergarten by Birth Month

| Birth Month | Frequency | Percent |
| :--- | :--- | :--- |
| January | 133 | 6.8 |
| February | 122 | 6.2 |
| March | 131 | 6.7 |
| April | 162 | 8.3 |
| May | 183 | 9.4 |
| June | 244 | 12.5 |
| July | 236 | 12.1 |
| August | 360 | 18.4 |
| September | 85 | 4.4 |
| October | 97 | 5.0 |
| November | 83 | 4.3 |
| December | 116 | 5.9 |
| Total | $\mathbf{1 9 5 2}$ | $\mathbf{1 0 0 . 0}$ |

Table 13: All Seminole County Students Retained in First Grade by Birth Month

| Birth Month | Frequency | Percent |
| :--- | :--- | :--- |
| January | 167 | 7.0 |
| February | 173 | 7.3 |
| March | 190 | 8.0 |
| April | 204 | 8.6 |
| May | 237 | 9.9 |
| June | 245 | 10.3 |
| July | 265 | 11.1 |
| August | 278 | 11.7 |
| September | 139 | 5.8 |
| October | 164 | 6.9 |
| November | 142 | 6.0 |
| December | 181 | 7.6 |
| Total | $\mathbf{2 3 8 5}$ | $\mathbf{1 0 0 . 0}$ |

## Race

A frequency analysis was conducted to determine the number of retentions by student race. Table 14 illustrates the results. The numbers and percentages for the three largest groups were White 4960 (46\%), Black 2799 (26\%), and Hispanic 2267 (21\%).

Table 14: All Seminole County Students Retention Frequency by Race

| Race | Frequency | Percent | Percent in <br> District |
| :--- | ---: | ---: | ---: |
| American Indian/Alaskan Native | 37 | .3 | .2 |
| Asian or Pacific Islander | 153 | 1.4 | 3.0 |
| Black, Non-Hispanic | 2799 | 26.0 | 13.0 |
| Hispanic | 2267 | 21.0 | 18.0 |
| Multiracial | 569 | 5.3 | 5.0 |
| White, Non-Hispanic | 4960 | 46.0 | 58.6 |
| Total | $\mathbf{1 0 7 8 5}$ | $\mathbf{1 0 0 . 0}$ | $\mathbf{1 0 0 . 0}$ |

A second frequency analysis was then conducted to determine the number of retentions by student race for students retained at the end of the 2006-2007 school year. Table 15 illustrates the results. The numbers and percentages for the three largest groups were White 1202 (43\%), Black 709 (25.4\%), and Hispanic 679 (24.4\%).

Table 15: Seminole County 2006-2007 Retention Frequency by Race

| Race | Frequency | Percent | Percent in <br> District |
| :--- | ---: | ---: | ---: |
| American Indian/Alaskan Native | 11 | .4 | .2 |
| Asian or Pacific Islander | 31 | 1.1 | 3.0 |
| Black Non-Hispanic | 709 | 25.4 | 13.0 |
| Hispanic | 679 | 24.4 | 18.0 |
| Multiracial | 155 | 5.6 | 5.0 |
| White Non-Hispanic | 1202 | 43.1 | 58.6 |
| Total | $\mathbf{2 7 8 7}$ | $\mathbf{1 0 0 . 0}$ | $\mathbf{1 0 0 . 0}$ |

## ESE Program

A frequency analysis of all students was completed to determine the ESE program, if any, in which retained students participate. Table 16 illustrates the results. The two ESE programs with the highest number of retained students were Specific Learning Disabilities with 1851 (17\%) and Language Impaired with 458 (4\%).

Table 16: All Seminole County Students Retention Frequency by ESE

| ESE | Frequency | Percent |
| :--- | ---: | ---: |
| None | 7358 | 68.2 |
| Autistic | 61 | .6 |
| Deaf or Hard of Hearing | 32 | .3 |
| Educable Mentally Handicapped | 142 | 1.3 |
| Emotionally Impaired | 246 | 2.3 |
| Gifted | 59 | .5 |
| Hospital/Homebound | 6 | .1 |
| Language Impaired | 458 | 4.2 |
| Orthopedically Impaired | 39 | .4 |
| Other Health Impaired | 85 | .8 |
| Profoundly Mentally Handicapped | 21 | .2 |
| Severely Emotionally Disturbed | 68 | .6 |
| Specific Learning Disabled | 1851 | 17.2 |
| Speech Impaired | 299 | 2.8 |
| Trainable Mentally Handicapped | 49 | .5 |
| Traumatic Brain Injured | 4 | .0 |
| Visually impaired | 7 | .1 |
| Total | $\mathbf{1 0 7 8 5}$ | $\mathbf{1 0 0 . 0}$ |

A second frequency analysis was then conducted to determine the frequency of students retained at the end of the 2006-2007 school year by ESE program. Table 17 illustrates the results.

Once again Specific Learning Disabilities with 291 (10.4\%) and Language Impaired with 94 (3.4\%) were the two programs with the highest number of retained students.

Table 17: Seminole County 2006-2007 Retention Frequency by ESE

| ESE | Frequency | Percent |
| :--- | ---: | ---: |
| None | 2134 | 76.6 |
| Autistic | 13 | .5 |
| Deaf or Hard of Hearing | 8 | .3 |
| Educable Mentally Handicapped | 20 | .7 |
| Emotionally Impaired | 47 | 1.7 |
| Gifted | 21 | .8 |
| Hospital/Homebound | 1 | .0 |
| Language Impaired | 94 | 3.4 |
| Orthopedically Impaired | 9 | .3 |
| Other Health Impaired | 22 | .8 |
| Severely Emotionally Disturbed | 27 | 1.0 |
| Specific Learning Disabled | 291 | 10.4 |
| Speech Impaired | 93 | 3.3 |
| Trainable Mentally Handicapped | 5 | .2 |
| Traumatic Brain Injured | 1 | .0 |
| Visually impaired | 1 | .0 |
| Total | $\mathbf{2 7 8 7}$ | $\mathbf{1 0 0 . 0}$ |

## ELL Program

A frequency analysis was performed to determine the number of students currently participating in the ELL program that have been retained. Table 18 illustrates the results. Of all the students in Database-2, 1070 (9.9\%) students are currently in the ELL program.

Table 18: All Seminole County Students Retention Frequency by ELL

| Participation <br> in ELL | Frequency | Percent |
| :--- | ---: | ---: |
| No | 9715 | 90.1 |
| Yes | 1070 | 9.9 |
| Total | $\mathbf{1 0 7 8 5}$ | $\mathbf{1 0 0 . 0}$ |

A similar frequency analysis was conducted to determine the number of students retained at the end of the 2006-2007 school year that were at the time in the ELL program. Table 19 illustrates the results. Of all the students retained last year, 340 (12.2\%) students were participating at the time in an ELL program.

Table 19: Seminole County 2006-2007 Retention Frequency by ELL

| Participation <br> in ELL | Frequency | Percent |
| :--- | ---: | ---: |
| No | 2447 | 87.8 |
| Yes | 340 | 12.2 |
| Total | 2787 | $\mathbf{1 0 0 . 0}$ |

## Socioeconomic Status (SES)

A frequency analysis was conducted to determine the distribution of all retained students by socioeconomic status (SES). Table 20 illustrates the results. The two largest groups of students were Did Not Apply with 4,776 (44.3\%) students and Eligible Free Lunch with 3,061 (28.4\%) students.

Table 20: All Seminole County Students Retention Frequency by Socioeconomic Status

| Status | Frequency | Percent |
| :--- | ---: | ---: |
| Did Not Apply | 5010 | 46.5 |
| Title I | 1594 | 14.8 |
| Eligible Free Lunch | 3061 | 28.4 |
| Eligible Reduced Price | 1120 | 10.4 |
| Total | $\mathbf{1 0 7 8 5}$ | $\mathbf{1 0 0 . 0}$ |

A second frequency analysis was then conducted to determine the distribution of students retained last year by socioeconomic status (SES). Table 21 illustrates the results. Once again the two largest groups of students were Did Not Apply with 1,246 (44.7\%) students and Eligible Free Lunch with 845 (30.3\%) students.

Table 21: Seminole County 2006-2007 Retention Frequency by Socioeconomic Status

| Status | Frequency | Percent |
| :--- | ---: | ---: |
| Did Not Apply | 1299 | 46.6 |
| Title I | 395 | 14.2 |
| Eligible Free Lunch | 845 | 30.3 |
| Eligible Reduced Price | 248 | 8.9 |
| Total | $\mathbf{2 7 8 7}$ | $\mathbf{1 0 0 . 0}$ |

## Research Question 5

How did students retained in previous years score on the 2006-2007 FCAT Reading and Math tests?

A series of one-sample $t$ tests were conducted to compare the FCAT Reading and Math Scale Scores of current students retained at least one time before the 2006-2007 school year to
the state minimum Level 3 Scale Score. Table 22 illustrates the results. Students in the sixth through tenth grades had mean scores that were significantly (t test 95\% confidence interval) less than the state minimum averages on both FCAT Reading and Math. The mean difference for third grade students was not significant for FCAT Reading and was significantly positive for FCAT Math.

Table 22: Seminole County FCAT Performance of Previously Retained Students

| Grade <br> (number of <br> students) | Retained <br> Students <br> Mean <br> Scale Score <br> FCAT <br> Reading | State Minimum <br> Level 3 Scale <br> Score <br> FCAT Reading | Retained <br> Students Mean <br> Scale Score <br> FCAT Math | State Minimum <br> Level 3 Scale <br> Score <br> FCAT Math |
| :--- | :--- | :--- | :--- | :--- |
| $\mathbf{3}^{\text {rd }} \mathbf{( 7 3 2 )}$ | 282 | 284 | $300^{* *}$ | 294 |
| $\mathbf{4}^{\text {th }} \mathbf{( 8 0 1 )}$ | $293^{*}$ | 299 | 296 | 298 |
| $\mathbf{5}^{\text {th }} \mathbf{( 7 7 9 )}$ | 284 | 286 | $311^{*}$ | 326 |
| $\mathbf{6}^{\text {th }} \mathbf{( 7 6 0 )}$ | $278^{*}$ | 296 | $282^{*}$ | 315 |
| $7^{\text {th }} \mathbf{( 5 9 9 )}$ | $286^{*}$ | 300 | $291^{*}$ | 306 |
| $\mathbf{8}^{\text {th }} \mathbf{( 5 8 8 )}$ | $284^{*}$ | 310 | $299^{*}$ | 310 |
| $\mathbf{9}^{\text {th }} \mathbf{( 7 6 6 )}$ | $291^{*}$ | 322 | $283^{*}$ | 296 |
| $\mathbf{1 0}^{\text {th }} \mathbf{( 6 2 0 )}$ | $278^{*}$ | 327 | $309^{*}$ | 315 |

* Indicates significantly below State Level 3 Minimum
** Indicates significantly above State Level 3 Minimum


## Hypothesis 1

The mean score of previously retained students on the 2006-2007 FCAT Reading and
Math tests is equal to the State Minimum Level 3 Scale Score.
For the values in Table 22 identified as significantly below or above the State Minimum Level 3 Scale Score, the null hypothesis should be rejected and the one-sided alternative hypothesis should be accepted.

## Research Question 6

How do students retained in the 3rd grade for the first time do on the FCAT Reading and Math tests in later grades?

Database-2 only contains FCAT scores for the 2006-2007 school year. Therefore to measure the effects of time on the performance of students retained for the first time in the third grade using only last year's scores we have to use a different group of third grader for each year out. For example, to measure the performance of the retained students when they reach the fifth grade, the students currently (2006-2007 school year) in the fifth grade that were retained at the end of the 2003-2004 school year-their first year in third grade-were used.

For each grade starting with third, a one-sample $t$ test was conducted to compare the mean FCAT Reading and FCAT Math Scale Score of students previously retained in the third grade to the state minimum Level 3 Scale Score. Table 23 illustrates the results. While the Math scores did not show a clear pattern, the Reading scores were significantly lower from $6{ }^{\text {th }}$ grade on.

Table 23: Seminole County FCAT Performance of $3^{\text {rd }}$ Grade Retained Students in Later Grades

| Year Retained in $3^{\text {rd }}$ Grade (number of students)*** | Grade in 2006-2007 <br> (number of students) | Retained <br> Students <br> Mean <br> Scale Score <br> FCAT <br> Reading | State <br> Minimum <br> Level 3 Scale <br> Score <br> FCAT <br> Reading | Retained <br> Students <br> Mean <br> Scale Score <br> FCAT Math | State <br> Minimum <br> Level 3 Scale <br> Score <br> FCAT Math |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 2005-2006 } \\ & (141) \end{aligned}$ | $\begin{array}{\|l\|} \hline 3^{\text {rd }} \\ (133) \end{array}$ | 285 | 284 | 309** | 294 |
| $\begin{aligned} & 2004-2005 \\ & (220) \\ & \hline \end{aligned}$ | $\begin{array}{\|l} \hline \text { 4th } \\ (196) \\ \hline \end{array}$ | 294 | 299 | 302 | 298 |
| $\begin{aligned} & 2003-2004 \\ & (323) \end{aligned}$ | $\begin{array}{\|l} \hline \text { 5th } \\ (200) \\ \hline \end{array}$ | 281 | 286 | 312* | 326 |
| $\begin{aligned} & 2002-2003 \\ & (323) \\ & \hline \end{aligned}$ | $\begin{aligned} & 6^{\mathrm{th}} \\ & (285) \end{aligned}$ | 275* | 296 | 286* | 315 |
| $\begin{aligned} & \text { 2001-2002 } \\ & (109) \end{aligned}$ | $\begin{aligned} & 7^{\text {th }} \\ & \text { (97) } \\ & \hline \end{aligned}$ | 288* | 300 | 300 | 306 |
| $\begin{aligned} & 2000-2001 \\ & (105) \end{aligned}$ | $\begin{aligned} & 8^{\text {th }} \\ & (88) \end{aligned}$ | 286* | 310 | 306 | 310 |
| $\begin{aligned} & 1999-2000 \\ & \text { (12) } \end{aligned}$ | $\begin{aligned} & 9^{\text {th }} \\ & (7) \end{aligned}$ | 293* | 322 | 306 | 296 |
| $\begin{aligned} & \text { 1998-1999 } \\ & \text { (37) } \end{aligned}$ | $\begin{aligned} & \text { 10th } \\ & (29) \\ & \hline \end{aligned}$ | 270* | 327 | 298 | 315 |

* Indicates statistically below State Level 3 Minimum
*     * Indicates statistically above State Level 3 Minimum
*** The discrepancies in each row between the number retained in third grade and the number in the current grade is due to second retentions and mid-year promotions.


## Hypothesis 2

The mean score of students previously retained in $3^{\text {rd }}$ grade on the 2006-2007 FCAT
Reading and Math tests is equal to the State Minimum Level 3 Scale Score.
For the values in Table 23 identified as significantly below or above the State Minimum
Level 3 Scale Score, the null hypothesis should be rejected and the one-sided alternative hypothesis should be accepted.

## Research Question 7

How did the different categories of students previously retained in the primary grades score on the 2006-2007 $3^{\text {rd }}$ grade FCAT Reading and Math tests?

Using Database-2, for each student attribute, the third grade students that had one or more retentions before the end of the 2006-2007 school year were divided into categories to compare their FCAT Reading and FCAT Math mean Scale Scores to the state minimum Level 3. A onesample $t$ test was conducted for each category. Tables 24 and 25 illustrate the results. Categories scoring significantly (t test 95\% confidence interval) below the minimum state Level 3 Reading score were the following: Black and Hispanic students, students retained in Kindergarten, students receiving free lunch or in Title I schools, ELL students, ESE students participating in SLD and Language Impaired programs. Categories scoring significantly below the minimum state Level 3 Math score were the following: Black students, students retained in Kindergarten, ESE students participating in Language Impaired programs and students attending Title I schools. Most scores significantly above the minimum state Level 3 scores were on the Math portion of the FCAT test.

Table 24: Seminole County FCAT Performance of $3{ }^{\text {rd }}$ Grade Retained Students by Categories

| Category | Category (number of students) | Retained <br> Students <br> Mean <br> Scale Score <br> FCAT <br> Reading | State <br> Minimum <br> Level 3 Scale <br> Score <br> FCAT <br> Reading | Retained <br> Students <br> Mean <br> Scale Score <br> FCAT Math | State <br> Minimum <br> Level 3 Scale <br> Score <br> FCAT Math |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Gender | Male (424) | 281 | 284 | 302** | 294 |
|  | Female (308) | 283 | 284 | 297 | 294 |
| Race | Black (208) | 261* | 284 | 278* | 294 |
|  | Hispanic (151) | 274* | 284 | 297 | 294 |
|  | Hispanic ELLNo (101) | 284 | 284 | 308* | 294 |
|  | Hispanic ELL yes (50) | 254* | 284 | 275* | 294 |
|  | White (302) | 295** | 284 | 313** | 294 |
|  | Multiracial (56) | 301** | 284 | 308 | 294 |
| Grade <br> Retained | KG (220) | 268* | 284 | 277* | 294 |
|  | First (255) | 293** | 284 | 314** | 294 |
|  | Second (128) | 281 | 284 | 302 | 294 |
|  | Third (129) | 284 | 284 | 309** | 294 |
| SES | Free Lunch (242) | 275* | 284 | 294 | 294 |
|  | Reduced (79) | 278 | 284 | 303 | 294 |
|  | Did not apply (249) | 299** | 284 | 315** | 294 |
|  | Title One (142) | 260* | 284 | 278* | 294 |
| ELL | Yes (59) | 261* | 284 | 288 | 294 |
|  | No (673) | 284 | 284 | 301** | 294 |
| ESE | None (441) | 296** | 284 | 312** | 294 |
|  | SLD (179) | 260* | 284 | 288 | 294 |
|  | Language Impaired (48) | 262* | 284 | 267* | 294 |
| Birth <br> Month | $\begin{aligned} & \text { May-August } \\ & \text { (319) } \end{aligned}$ | 286 | 284 | 303** | 294 |
|  | $\begin{aligned} & \text { Sept. - Dec. } \\ & (193) \end{aligned}$ | 276 | 284 | 298 | 294 |

* Indicates statistically below State Level 3 Minimum
** Indicates statistically above State Level 3 Minimum

Table 25: Seminole County FCAT Performance of $3{ }^{\text {rd }}$ Grade Retained Students by Race and SES

| Category <br> Race and SES <br> (number of <br> students) | Retained <br> Students <br> Mean <br> Scale Score <br> FCAT <br> Reading | State <br> Minimum <br> Level 3 Scale <br> Score <br> FCAT <br> Reading | Retained <br> Students <br> Mean <br> Scale Score <br> FCAT Math | State <br> Minimum <br> Level 3 Scale <br> Score <br> FCAT Math |
| :--- | :--- | :--- | :--- | :--- |
| White <br> (302) | 295 | 313 | 294 |  |
| White Free <br> Lunch (64) | 285 | 284 | 302 | 294 |
| White Non- <br> free Lunch <br> (172) | $303^{* *}$ | 284 | $321^{* *}$ | 294 |
| White Title <br> One <br> (21) | 265 | 284 | 277 | 294 |
| Black <br> (208) | $261^{*}$ | 284 | 274 | 294 |
| Black Free <br> Lunch (87) | $271^{*}$ | 284 | 284 |  |
| Black Non- <br> free Lunch <br> (20) | 268 | 284 | 294 |  |
| Black Title <br> One (84) | $249^{*}$ | 284 | 294 |  |
| Hispanic <br> (151) | 274 | 284 | 284 |  |
| Hispanic Free <br> Lunch (72) | $263^{*}$ | 284 | 294 |  |
| Hispanic Non- <br> free lunch (27) | 289 | 284 | 294 |  |
| Hispanic Title <br> One (21) | 281 | 284 | 294 |  |

* Indicates statistically below State Level 3 Minimum
** Indicates statistically above State Level 3 Minimum


## Hypothesis 3

The mean score of students, in specific categories, previously retained in the primary grades on the 2006-2007 FCAT Reading and Math tests is equal to the State Minimum Level 3 Scale Score.

For the values in Table 24 and 25 identified as significantly below or above the State Minimum Level 3 Scale Score, the null hypothesis (Hypothesis 3) should be rejected and the corresponding one-sided alternative hypothesis should be accepted.

## CHAPTER 5 DISCUSSION OF FINDINGS AND RECOMMENDATIONS

The retention of students is widely used as an intervention for students with academic concerns without consistent follow-up to determine if the retention of the student was successful. This research study was conducted to determine whether elementary students who were retained are currently having academic success in their current grade.

## Agreements with Literature Review

This study supports some of the criticism of retention found in the literature. Specifically it supports the assertions that (a) students who have been retained continue to do poorly throughout their school years, especially over the long term; (b) students in certain categories are more likely to be retained; and finally (c) students in some of those same categories are more likely to fail after retention.

## Findings

This section contains a discussion of the results of the data analyses.

## Question One

How many Seminole County students have one or more retentions?
An analysis of the student records found that out of a total population of 62,417 students currently enrolled in the Seminole County School System, 10,785 (17.2\%) students have one or more retentions, 1514 (2\%) students have two or more retentions, and 184 ( $0.2 \%$ ) students have three or more retentions. The relatively low number of students with second and third retentions
should not be interpreted as a measure of the success of the first retention. The only grades where retentions are mandatory are third grade, where the decision is based on FCAT scores, and ninth through twelfth grade, where the decision is based on number of credits earned. In the other grades, although there is a student progression plan to evaluate the need for retention, final decision for grade placement is the responsibility of the principal. Therefore, the low number of second and third retentions, as will be shown later, may not be due to academic success, but instead it may be due to reluctance to retain by the principals.

## Question Two

What percent of students at each Seminole County School have been retained at least once?

An analysis of the student records for each school, at the end of the 2006-2007 school year, yielded the percent of students retained at each elementary, middle and high school in Seminole County. Of all the students in the county, $17 \%$ were retained at least one time; however, there was a wide disparity among schools. (A complete list of retentions of students by school is available in Chapter Four.) Although many factors contributed to the number of retentions at a given school, the socio-economic status of the students at the school was probably the most important factor. This relationship, pointed out by previous studies, is strongly supported by our analysis of the Seminole County student records. The following Title I schools (schools with above district average numbers of poor children) had a significantly greater percentage of students being retained than the $17 \%$ county average: Goldsborough Elementary (29\%), Hamilton Elementary (27\%), Idyllwilde Elementary (32\%), Midway Elementary (26\%), Pinecrest Elementary (31\%), and Wicklow Elementary (35\%).

## Question Three

To what extent are students retained in some grades more than in others?
An analysis of the student records for students retained during the 2006-2007 school year found $9^{\text {th }}$ grade to be the grade with the most first, second and third retentions. As previously discussed, beginning in $9^{\text {th }}$ grade, and continuing through the high school years, the amount of credits earned determines assignment to the next grade which in effect makes the retentions mandatory, thus the high number of retentions in those grades. Note that out of the 529 students retained for the second time during the 2006-2007 school year, 121 (22.9\%) were ninth graders, and of the 96 students retained for the third time, 30 (31.2\%) were ninth graders. Obviously these students were retained one or two times in elementary school, performed poorly after the retentions-but not poorly enough to be retained again—and finally upon reaching ninth grade were given a mandatory retention.

First grade with 326 (15\%), and Kindergarten with 256 (11.8\%) were the next two grades with the largest number of first retentions. A probable cause is the fact that in the primary grades children are evaluated using grade level specific standards, and it is common practice to retain those not performing well. Yet, during the 2006-2007 school year, out of the 529 students retained for the second time, 68 (12.9\%, the highest percentage in grades K to 8th) were third graders, once again showing high numbers of retentions in grades where retentions are mandatory. It also indicates that the first retention was not a successful intervention for these third graders.

## Question Four

To what extent are some categories of students retained more than others?

An analysis of the students retained during the 2006-2007 school year gave results consistent with previous studies (see Chapter Two, Literary Review) that identified student categories that have the highest frequency of retention. First, the number of males being retained was significantly greater than the number of females being retained. During the 2006-2007 school year, $39.9 \%$ of the students retained were females and $60.1 \%$ were males. This prevalence of males was found in all grades.

Age also played a role in retention frequency. Students born in the summer months, before the September $1^{\text {st }}$ cut off, had high retention rates. This clearly indicates that the younger students have a more difficult time obtaining the grade level specific skills than their older peers. Retentions of these younger students tend to take place in the early grades. This trend comes to light as we look at the birth month frequencies of students retained for the first time in kindergarten and first grade. For example, the percentage of students retained in kindergarten that were born in August, $18.4 \%$ (360) was more than four times the percentage of students that were born in September, 4.4\% (85).

Race played a large role in retention rates. While African Americans and Hispanics made up $13 \%$ and $18 \%$ respectively of the total Seminole County student population, African Americans and Hispanics made up $25.4 \%$ and $24.4 \%$ respectively of students retained at the end of the 2006-2007 school year. Clearly a disproportionate number of African American and Hispanics are being retained. A frequency analysis of all current students that have ever been retained yielded similar values, 26\% African Americans and 21\% Hispanic. The discrepancy in the percentages for Hispanics is probably due to an increase in the Hispanic population of the county, and not to any educational factors.

Participation in an ESE program played a role in the frequency of retentions for students. Of all students in the county, 6.6\% of students participate in Specific Learning Disabled (SLD) programs and 4.1\% of students participate in Language Impaired (LI) programs.

SLD students represented $10.4 \%$ (291) and LI students represented 3.4\% (94) of the students being retained at the end of the 2006-2007 school year. An analysis of all current students ever retained yielded the following results: SLD students represented 17.2\% (1851) and LI students represented $4.2 \%$ (458) of the total. Clearly the SLD students, as expected, are overrepresented, while the number of LI students being retained is more in line with the total number of LI students. Many times students are retained in the primary grades before being screened for ESE programs. This practice explains why the percentage of ESE students for all retentions is greater than the percentages for this year's retentions. In other words, many students who were retained years ago appear in the database as retained and diagnosed, even though the diagnosis may have occurred after the retention. On the other hand, some students who were retained this year may still be waiting for the diagnosis. This is an example of retention being used as the first intervention for struggling students instead of screening students in order to provide them with the appropriate learning environment long before retention becomes inevitable.

Participation in an ELL Program also played a large role in retention rates. While ELL students only make up 4\% of the total Seminole County student population, ELL students made up $12 \%$ (340) of the students retained during the 2006-2007 school year. Clearly a disproportionate number of ELL students are being retained when compared to the percent of students participating in the ELL program district wide. A frequency analysis of all current
students who have ever been retained yielded similar values, 9\% (1070) of ELL students being retained compared to the districts $4 \%$ of students participating in ELL programs.

Socioeconomic status (SES) is a factor to be considered when estimating the likelihood of a student being retained. Of all the students retained at the end of the 2006-2007 school year, $30.3 \%$ (845) of the students received free lunch in non-Title I schools as compared to the $16 \%$ of the total student population receiving free lunch in non-Title I schools. Moreover, students attending Title I schools made up $14.2 \%$ (395) of all the students retained at the end of the 20062007 school year-a disproportionate number of retentions when compared to the $6.8 \%$ of the total population that attend Title I schools. Obviously, students from poor families tend to be retained at a higher rate than students from more affluent families.

## Question Five

How did students retained in previous years score on the 2006-2007 FCAT Reading and Math tests?

The mean 2006-2007 FCAT Reading and Math scores in third grade through tenth grade were compared to the state minimum scores (see Table 14). As a rule, students in the lower grades scored better than students in the upper grades. As a matter of fact, third grade students scored significantly higher than the state minimum score in the FCAT Math test. From the analyses used to answer Question 3, we know that a large number of retentions occur in the primary grades; therefore, the amount of time that has lapsed since the retention is on average longer in the secondary grades than in the lower grades. These results are consistent with findings from previous studies: that is, students generally do better within one to two years after their retention but do below average later on.

The high third grade FCAT Math scores may be attributed to the fact that students are not retained for math difficulties, just reading; hence, students who are not necessarily having problems with math are being taught the material for a second time which in turn leads to higher scores.

## Question Six

How do students retained in the 3rd grade for the first time do on the FCAT Reading and Math tests in later grades?

An analysis was conducted to determine long-term effects of retention on students after being retained in third grade (see Table 15). Beginning with third grade, the students' scores on the FCAT Reading and Math tests were compared to the state minimum requirement. Students did not show a significant higher or lower score on FCAT Reading in third, fourth or fifth grade. Beginning in sixth grade the students' scores on the FCAT Reading tests were significantly lower than the state minimum score. These finding are consistent with the research in the Literature Review which found that students' performance, as a result of repeating the same material, improves modestly for several years after the retention, but that then the gains begin to fade. The students’ scores in the FCAT Math tests did not exhibit a clear-cut pattern. Of course, that can be explained by the fact that retention in the third grade is determined solely by reading performance.

## Question Seven

How did the different categories of students previously retained in the primary grades score on the 2006-2007 $3^{\text {rd }}$ grade FCAT Reading and Math tests?

An analysis of the 2006-2007 current $3^{\text {rd }}$ grade students was performed to determine the success of students after being retained one or more times in the primary grades, Kg through $3^{\text {rd }}$ (see Tables 16a and 16b).

## Gender

Although boys are more likely to be retained than girls, after retention gender does not play a role. Specifically, both boys and girls scored slightly less than the FCAT Reading minimum, and both boys and girls scored above the FCAT Math minimum.

## Race

White students exceeded the minimum requirements in FCAT Reading and Math and Multi-racial students did just as well. Black students had difficulty both on the FCAT Reading and Math test after retention, whereas Hispanic students had difficulty on the FCAT Reading portion. Of course, the race of the student should not be used as a predictor of success when evaluating an individual, for the educational and economic status of the parents is the allimportant predictor. Hispanic students are also more likely to have problems with the English language. For many of them, English is not their primary language at home. Although many of the Hispanic students participate in the ELL program, becoming proficient in a second language takes several years. Note that when we considered Hispanics not participating in the ELL program, the students scored at the state's minimum level for Reading and scored significantly higher than the state's minimum requirement for Math.

Also worthy of note are the scores of white and Hispanic students receiving free lunch or attending Title I schools. They scored lower than the more affluent white and Hispanic students.

That was not the case with the black students. Black students in Title I schools scored very low, but paradoxically black students in non-Title I schools, not receiving free lunches scored lower than those receiving free lunches. A possible explanation could be that the students are not receiving free lunches not because they can afford them, but because their parents have not applied for the benefit.

## Grade Retained

Students that were retained in Kindergarten scored significantly below the state minimum on the third grade FCAT Reading and Math tests, while students who were retained in first grade scored significantly above the state minimum on both tests. Two points can be made to explain this pronounced difference: (a) First grade is the primary place where students begin to practice phonemic awareness and phonics, the keys to reading success, whereas in kindergarten the focus is more on emergent literacy skills such as identifying letters. Obviously repeating first grade contributes more to the future success than repeating kindergarten. (b) Students having trouble in kindergarten are typically too young or have a learning disability that has yet to be diagnosed since academic screenings for ESE conditions typically do not take place until $2^{\text {nd }}$ grade. The young students probably benefit from the retention, but the students with serious learning disabilities will continue to struggle in school.

## SES

Students receiving free lunch or attending Title I schools did markedly worse than the rest of the students. Again the importance of economics is supported by these results.

## ELL

Students participating in the ELL program scored significantly below the state minimum on the FCAT Reading test, but not on the FCAT Math test.

## ESE

SLD students scored significantly below the state minimum on the FCAT Reading test, but not on the FCAT Math test. Although students who participate in the Language Impaired program are not more likely to be retained than other groups, LI students who have been retained scored significantly below the state minimum on both the FCAT Reading and Math tests.

## Age

Students born in the summer months met the state minimum in the FCAT Reading test and significantly exceeded the state minimum in the FCAT Math test. Many of these students were retained for causes directly related to their age. Now after the retention, those causes have been removed and the students are probably performing at average, if not above average, levels.

## Profile

From these results for the different categories, the profile of the more successful student after retention emerges:

- Race: White or Multiracial
- Age: Born in the summer months.
- Grade Retained: Students retained in first grade
- ESE: Not participating in any ESE program
- SES: Not receiving free or reduced lunch and not attending Title I schools
- ELL: Not participating in an ELL program

Basically this profile describes a student that does not have any major barriers in his/her way to academic success; moreover, it describes a student that may not need retention. Unfortunately, this profile does not describe the majority of students who are being retained.

## Recommendations

Detailed analysis of the data revealed some patterns that led to some of the recommendations that follow.

1. As verified by this study, retention of high-risk students, such as Blacks, Hispanics and low SES students, do not usually succeed. Therefore it should be mostly used when none of these high-risk factors are interfering with the students learning. Otherwise, alternative interventions should be considered instead of or in addition to the retention whenever possible.
2. The high rate of success, found by this study, of students who were retained in the 1st grade and the low rate of success of students who were retained in Kindergarten suggest that children who are candidates for retention in kindergarten should perhaps be assigned to 1st grade and, if needed, retained the following year, in 1st grade.
3. This study found that some students are being retained before they have been evaluated for ESE programs. To stop this practice, the following new policy should be put in place: If during the course of the school year, it becomes obvious that a student will likely be
retained, the student should be immediately evaluated to determine if he qualifies for an ESE program that may accommodate his academic needs, thereby in some cases avoiding retention.
4. This study, as well as prior studies, supported that after a few years the benefits of retention disappear. Therefore to ensure continued success after retention, retained students should automatically qualify for special intensive intervention services in the areas of reading, math, and study skills for the remainder of their educational years. In addition, a protocol should be put in place to closely monitor student progress and determine the appropriate interventions that will help the student succeed. This approach is most needed during the high school years when retained students tend to drop out at a higher rate than other students.
5. Students who are retained because of below average performance in reading, but not in math, should not have to repeat the math curriculum, but instead should be allowed to continue the normal math path. A possible approach is to have transitional grades.
6. As can clearly be seen from this study, retained students do not always succeed. To try to increase the rate of success, parents of retained students should be given appropriate information on how to best assist the whole child through the retention process and the ensuing years. Information on services available, practices to do at home, and strategies to guarantee that the retention does not have long term negative effects should be provided in the form of workshops and literature materials. Specifically, parents should be encouraged to apply for all the assistance programs, such as free breakfast and lunches, free after school tutorial programs and free backpack and school supplies programs.

## Recommendations for Future Studies

While conducting this study the following recommendations for future studies became apparent.

1. The final decisions for non-mandatory retentions in Seminole County schools are made by the principals. It would be valuable to take a survey of principals on their knowledge of retention and how they determine when to use retention as intervention.
2. This study measured student academic achievement after a retention. A similar study to measure the effectiveness of the other possible interventions such as summer school and tutorial should be conducted.
3. The benefits from retention fade as the years go by. A study of different instructional approaches the year after the retention that may prolong the benefits of the retention should be undertaken.

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