THE IMPACT OF SCHOOL CHOICE ON STUDENT READING ACHIEVEMENT IN THE NO CHILD LEFT BEHIND (NCLB) ERA

By

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To my family, for their constant support
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LIST OF ABBREVIATIONS

AYP  Adequate Yearly Progress. An individual state’s measure of progress toward reading/language arts and math proficiency. Technically, it refers to the minimum level of proficiency that the state, school districts, and schools must achieve each year on annual tests and related academic indicators (U.S. Department of Education, 2009a).

FCAT  Florida Comprehensive Achievement Test. The state’s annual test of student achievement that is administered to students in grades 3-11 across the state. The FCAT measures student performance on the Sunshine State Standards in reading and mathematics (grades 3-10), science (grades 5, 8, and 11), and writing (grades 4, 8, and 10; Florida Department of Education, 2005b).

LEA  Local Education Agency. A public board of education, other public institution, or agency that holds administrative control of and provides direction for a public school (Florida Department of Education, 2005b).

NCLB  No Child Left Behind. The Elementary and Secondary Education Act (ESEA), reauthorized as the No Child Left Behind Act of 2002. This mandate is built on four principles: accountability for results, more choices for parents, greater local control and flexibility, and an emphasis on doing what works based on scientific research (U.S. Department of Education, 2009a).

SEA  State Education Agency. The State Board of Education or other agency or officer primarily responsible for the supervision of public schools in a state (Florida Department of Education, 2005b).

SSS  Sunshine State Standards. Educational standards approved by the State Board of Education in 1996 for student achievement in Florida. The standards cover seven subject areas, with each area divided into four separate grade clusters (PreK-2, 3-5, 6-8, and 9-12; Florida Department of Education, 1996).
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THE IMPACT OF SCHOOL CHOICE ON STUDENT READING ACHIEVEMENT IN THE NO CHILD LEFT BEHIND (NCLB) ERA

By

Brian Douglas Castellani

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When No Child Left Behind (NCLB) became law, it was clear that government leaders wanted to align high-stakes testing with school, district, and state accountability. The goal was for all students to be successful, as defined by NCLB. An important part of this law is for all students to have the choice to attend higher-performing schools if their zoned school is deemed underperforming. For the first time, legislation provided this option to everyone. Since the choice option was enacted, few studies have explored the relationship between school choice and reading achievement. The purpose of this study was to determine whether there is a relationship between school choice and student achievement for selected subgroups (gender, race, English Language Learner [ELL] status, Exceptional Student Education [ESE] status, economically disadvantaged status) and subtests (Overall Reading Score, Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest) on the fourth grade Reading Florida Comprehensive Achievement Test (FCAT). This study also determined which factors predicted reading achievement during the 2008 and 2009 FCAT administrations.
The third and fourth grade Reading FCAT Developmental Scale Scores of 953 students were collected from one Southwest Florida school district. Student data were separated into two groups (School Choice and non-School Choice) and further separated by subgroups. Data from subgroups were analyzed separately, using SAS, Version 9.2. Three research questions were addressed, using tests of comparison groups (chi-square tests for binary variables and categorical groups and $t$-tests for numerical variables) and bivariate testing and regression ($t$-tests for binary variables and ANOVA, with a follow-up Tukey-Kramer procedure for categorical predictors). The correlation between 2008 and 2009 reading scores also was determined.

The results of this study indicate that there is no evidence to support the claim that school choice significantly affects reading achievement. Students in both the School Choice and non-School Choice groups made statistically comparable gains on the Reading FCAT (overall and subtests) from 2008-2009. School Choice students outperformed non-School Choice students at a statistically significant level on all subtests in both 2008 and 2009. Students classified as Caucasian, non-economically disadvantaged, and non-ELL scored at a statistically significant higher rate than economically disadvantaged, African American, Hispanic, Haitian Creole, and active ELL in both years. While all subgroups are making comparable gains, it is clear that the achievement gap is not closing. Additionally, economically disadvantaged students, ELL students, and students from certain racial groups (African American and Hispanic) transferred at significantly lower rates than did students from comparison groups (non-economically disadvantaged, non-ELL, and Caucasian). The findings show that
students who took advantage of the opportunity to transfer included those who were the least disadvantaged. This is in direct contrast to the original intent of NCLB.
CHAPTER 1
INTRODUCTION

Theoretically, parents always have been able to choose which schools their children attend. The predominant form of choice in the United States is parents’ choosing their residence as a means to ensure that their children can attend a certain neighborhood school (Hoxby, 2002). This pattern of choice, however, has resulted in an unequal system in which high-income parents routinely have the opportunity to exercise more choice because they have the ability to reside in preferable school zones (Hoxby, 1998). Moreover, affluent parents have the option to send their children to private schools and/or to provide home schooling if the zoned public school does not meet their needs (Hall, 2010).

In January 2001, President George W. Bush signed No Child Left Behind (NCLB) into law. This legislation attempted to align high-stakes testing with specified accountability measures, the latter of which were designed to ensure that all students reach minimum proficiency targets (Smith, 2005). An important component of NCLB is ensuring that all students have an opportunity to attend higher-performing schools if their zoned school is designated as needing improvement (Simpson, LaCava, & Graner, 2004). Theoretically this option provides parents with an opportunity to think about what makes a school “good” and what kind of education they want for their child (Neild, 2005). In this regard, Bast and Walberg (2004) contend that parents can do a better job of choosing schools for their children than can government agencies. Prior to this legislation, this option was not available to all parents.

NCLB requires states and districts to offer public school choice at the same time that it notifies parents that a school had been identified for school improvement,
corrective action, or restructuring (U.S. Department of Education, 2009c). This information is required to be in an easily understood format and written in the parents’ home language so that all families understand their rights. Additionally, school districts are responsible for providing or paying for transportation so that students can attend the school of their choice (U.S. Department of Education, 2009d). Thus, if the neighborhood school is designated as underperforming, legislation provides all students in that school zone have the opportunity to attend a higher performing school.

The mandate has caused market forces to be introduced into public education (Hastings, Van Weelden, & Weinstein, 2007). NCLB also requires that schools are evaluated yearly and that subgroups meet state proficiency targets. These subgroups included major ethnic/racial groups (African American, Asian/Pacific, Caucasian, Hispanic, and Native American), economically disadvantaged students, English Language Learners (ELL), and students with disabilities (U.S. Department of Education, 2002). The rationale for this mandate is that it offers schools that are in danger of failing an opportunity to improve their academic performance and to avoid political embarrassment and potential revenue losses from student attrition (Greene, 2001).

When considering school choice from a policy perspective, one needs to ask two important questions: First, how will school choice affect school quality? (Hastings, Kane, & Staiger, 2005). Second, how will school choice affect student achievement? (Hoxby, 2002). Research on school choice has showed unexpected results. For example, not all studies show a correlation between school choice and improved student achievement. Researchers have reported that there is no significant difference in reading achievement between students who chose to transfer and those who stay in
neighborhood schools designated by state and federal measures as needing to improve (Hall, 2010; Kirkland, 2009; Phillips, Hausman, & Larsen, 2009; McCombs, 2007; U.S. Department of Education, 2008). Additionally, Nicotera, Teasley, and Berends (2007) found that students who elected not to transfer to other schools initially outperformed those who transferred. Overall, researchers have consistently recommended that additional research is needed to determine the relationship between student achievement and school choice.

**Purpose of the Study**

The purpose of this study was to determine whether school choice affects student reading achievement. As noted, NCLB provides the opportunity for students at failing schools to transfer to higher-performing schools (U.S. Department of Education, 2003). There is a gap in the literature, however, related to the success of NCLB school choice programs as measured by student reading achievement. This study analyzed reading test scores for students who used the NCLB school choice option versus those who remained in their zoned schools. The findings from this study provide school and district decision makers with an opportunity to consider the effectiveness of school choice in relation to student reading achievement.

Specifically, the purpose of this analysis was to assess the impact of the school choice option between 2007 to 2008 and 2008 to 2009 in one suburban Southwestern Florida district. The following research questions were addressed.

What is the relationship between School Choice and non-School Choice, when compared by gender, race, English Language Learner (ELL) status, Exceptional Student Education (ESE) status, economically disadvantaged status, Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and
Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest of the Reading FCAT?

What factors predicted reading achievement in 2008?

What factors predicted reading achievement in 2009?

The following null hypotheses guided the investigation:

$H_0^1$: There will be no statistically significant relationships between School Choice and non-School Choice when compared by gender, race, ELL status, ESE status, economically disadvantaged status, Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest, as measured by the FCAT Developmental Scale Score in 2008 and 2009.

$H_0^2$: There will be no statistically significant relationships between the control variables of student gender, race/ethnicity, economically disadvantaged status, ESE status, and ELL status and overall reading mean scores in 2008.

$H_0^3$: There will be no statistically significant relationships between the control variables of student gender, race/ethnicity, economically disadvantaged status, ESE status, and ELL status and overall reading mean scores in 2009.

**Significance of the Study**

A priority of NCLB was to give parents choices about where their children attend school. Although 6.9 million students were eligible for school choice between 2002 and 2007, only 1% chose this option (U.S. Department of Education, 2009d). The relationship between NCLB school choice and its impact on student achievement has not been clearly established (Kirkland, 2009). The State of Florida, in particular, appears
to lack a system for evaluating the implementation and effectiveness of NCLB school choice (Hall, 2010). This study analyzed the results of the FCAT reading test for 4th grade students who elected to use NCLB school choice and compared their scores to those students who were eligible for school choice but remained at their zoned schools. These results are likely to allow school personnel, districts, and state departments to make more informed program decisions for schools and individual students and to begin exploring program effectiveness in reading within choice and non-choice schools.

**Definition of Terms**

To provide an understanding of the concepts and terms related to this study, the following definitions are provided:

**Adequate Yearly Progress (AYP):** An individual state’s measure of progress toward reading/language arts and math proficiency. Technically, it refers to the minimum level of proficiency that the state, school districts, and schools must achieve each year on annual tests and related academic indicators (U.S. Department of Education, 2009).

**Developmental scale score:** This score is a measure of student learning as a student moves from one grade level to the next (Florida Department of Education, 2010).

**Economically disadvantaged:** Refers to students who are members of households that meet the income eligibility guidelines for free or reduced-price meals under the National School Lunch Program (Wisconsin Department of Public Instruction, 2009).

**Florida Comprehensive Achievement Test (FCAT):** The state’s annual test of student achievement that is administered to students in grades 3-11 across the state.
The FCAT measures student performance on the Sunshine State Standards in reading and mathematics (grades 3-10), science (grades 5, 8, and 11), and writing (grades 4, 8, and 10; Florida Department of Education, 2005b).

**Local Education Agency (LEA):** A public board of education, other public institution, or agency that holds administrative control and direction of a public school (Florida Department of Education, 2005a).

**LF:** A code used by the state of Florida to identify a student who has exited an ELL program who is followed for a two-year period beyond the program (Florida Department of Education, 1994).

**LY:** A code used by the state of Florida to identify a student classified as limited English proficient and who receives specific instruction services that are designed for ELL students, regardless of model/approach that is used to deliver these instructional services (Florida Department of Education, 1994).

**LZ:** A code used by the state of Florida to identify a student who has completed the two-year follow-up period after exiting the ELL program (Florida Department of Education, 1994).

**No Child Left Behind (NCLB):** The Elementary and Secondary Education Act (ESEA), reauthorized as the No Child Left Behind Act of 2002. This legislative mandate is built on four principles: accountability for results, more choices for parents, greater local control and flexibility, and an emphasis on doing what works based on scientific research (U.S. Department of Education, 2009a).

**No Child Left Behind (NCLB) School Choice:** Refers to schools that receive federal Title I funds that have not made state-defined AYP for two consecutive school
years and are now designated as needing improvement. Students in these identified schools must be given the option to transfer to another public school (one that has not been identified as in need of improvement), and the school district is required to provide the transportation (U.S. Department of Education, 2009a).

**State Education Agency (SEA):** The State Board of Education or other agency or officer primarily responsible for the supervision of public schools in a state (Florida Department of Education, 2005a).

**Sunshine State Standards (SSS):** Educational standards approved by the State Board of Education in 1996 that provide expectations for student achievement in Florida. The standards cover seven subject areas, with each area divided into four separate grade clusters (PreK-2, 3-5, 6-8, and 9-12; Florida Department of Education, 1996).

**Title 1:** Funding authorized under the ESEA provision that all children have a fair, equal, and significant opportunity to obtain a high-quality education (U.S. Department of Education, 2009b).

**ZZ:** A code used by the state of Florida to identify a student who has never received ELL services (Florida Department of Education, 1994).
CHAPTER 2
REVIEW OF THE LITERATURE

This review provides an overview of the literature that is relevant to this study, including federal interest in education; background of No Child Left Behind (NCLB); NCLB school choice; characteristics of choosers; school choice and student achievement; NCLB school choice, student achievement, and demography; and the Florida Comprehensive Achievement Test (FCAT). The review shows that the relationship between the bodies of literature supports the need for an analysis of whether the NCLB school choice option affects student achievement.

Federal Interest in Education

Throughout the educational history of the United States, public school systems have been regulated by individual states, and the federal government has provided funding to states and local districts to motivate their participation in selected federal programs. One policy, Title 1 of the Elementary and Secondary Education Act (ESEA), was designed to motivate states and local school districts to focus on specific student groups and to increase the services, e.g., pull-out remedial programs and additional staff working directly with the identified students, provided to them. Through this policy, which offered decision makers financial assistance if they undertook certain prescribed activities such as supplemental services in pull-out classes, the federal government strove to influence state and local programs (McDonnell, 2005).

The federal government’s interest and participation in education policy are driven by decades of stagnating or declining scores on two key nationally administered tests, the Scholastic Aptitude Test (SAT) and the National Assessment of Educational Progress (NAEP; Fusarelli, 2004). Between 1963 and 1980, the average verbal and
math scores on the SAT declined by 50 and 40 points, respectively. These results were well below comparable scores of foreign students, which contributed to federal policymaker’s concerns (Heise, 1999). Additionally, reading and math scores on NAEP have shown little improvement since 1975, despite a tenfold increase in federal spending on ESEA (Fusarelli, 2004). Moreover, student performance on international comparative tests fell below that of other nations, reaching back as far as the First International Mathematics and Science Study in the 1960s. Lawmakers reacted to these results by increasing federal involvement in education.

Since the passage of ESEA, there has been little accountability for districts and schools who receive federal funding. Historically, schools earned funding based solely on numbers of eligible students, with little focus on whether the funding improved the performance of targeted populations (Fusarelli, 2004). To increase accountability for student achievement, recent elementary and secondary education reform proposals such as NCLB require school competition to raise test scores and to expand parental choice. These reforms have created an expectation that schools will improve student performance rather than risk losing students or facing federal sanctions (Smith, 2005).

**Background of No Child Left Behind (NCLB)**

“The principles of the No Child Left Behind Act date back to the 1954 Brown v. Board of Education case when the U.S. Supreme Court outlawed racial segregation in public schools and ruled that the ‘separate but equal doctrine’ was unconstitutional” (U.S. Department of Education, 2004, p. 13). The passage of this act evolved from over 50 years of related legislation. In 1964, President Lyndon Johnson formed the Gardner Commission. The intent of this federal commission was to make policy recommendations to the president in regard to federal education aid to schools. The
committee recommended ESEA, which was approved by Congress on April 11, 1965. The purpose of Title 1 of ESEA was to motivate states and local school districts to allocate resources to targeted groups and to increase the level and quality of services provided to these students (McDonnell, 2005). Title 1 represented the largest financial component of the ESEA legislation (Thomas & Brady, 2005).

The evolution of Title 1 followed three distinct phases over the next 45 years. The first phase (1965-1980) followed Brown v. Board of Education. During that time, Title 1 program funds were dedicated to economically disadvantaged students in need of services such as pull-out remedial programs. In most schools, these programs operated separately from the main instructional program (McDonnell, 2005).

During the second phase (1981-1987), the Education Consolidation and Improvement Act of 1981 (ECIA) was passed. Not long after, A Nation at Risk (1983), published by the Reagan administration, emphasized that educational standards needed to be raised and accountability increased (Smith, 2005). This publication promoted the belief that public schools were unsuccessful, based on falling or stagnating scores on the SAT and NAEP. ECIA, part of President Ronald Reagan’s Omnibus Budget Reconciliation Act of 1987, reduced federal funding across most domestic policy areas, including ESEA. Under this act, Title 1 was renamed Chapter 1 (Thomas & Brady, 2005). Although Chapter 1 retained Title 1’s intent to fund compensatory educational services for economically disadvantaged students, significant reductions and relaxed regulatory requirements reduced student eligibility for services (Thomas & Brady, 2005).
The third phase of the Title 1 evolution, signified by the 1988 ESEA reauthorization, required states to define academic achievement criteria. State agencies were required to submit plans that detailed the use of high-level content, student performance standards, state assessments, and annual reports on the attainment of standards. In addition, plans for supporting teachers and students, aligned with updated curriculum standards and specified assessment instruments, were part of the documenting requirements (McDonnell, 2005). During this time, state adoption of accountability structures became more standard. By the late 1980s and early 1990s, a majority of states began to use test results to hold schools accountable for student performance (Linn, 2005). Although the emphasis on raising standards could be traced back to at least the 1980s, federal interest in public school accountability, paired with high-stakes testing and components of school choice, led to the creation and passage of NCLB (Smith, 2005).

One piece that was missing from all versions of ESEA was direct accountability for student performance. This changed in January 2002, when President George W. Bush signed into law NCLB, Public Law 107-110. This act linked high-stakes testing with specified accountability measures to ensure that students in schools that received federal funding would show evidence of success (Smith, 2005). Although this act altered the requirements of ESEA, it continued the practice of distributing federal funds to school districts with lower economic and multicultural student populations (Arce, Luna, Borjian, & Conrad, 2005).

NCLB guidelines stipulated that states use Adequate Yearly Progress (AYP) as the measure to hold schools accountable. In January 2003, as required, each state
submitted to the U.S. Department of Education a detailed plan that outlined the steps that they would take to ensure compliance with the statutes set forth under NCLB. By 2005, states were required to annually assess student performance in grades 3 to 8 in language arts, literacy, and mathematics. States also had to indicate how individual schools and school districts would demonstrate AYP as well as make public their test results (Smith, 2005). AYP requires that all subgroups, including major ethnic/racial groups (African American, Asian/Pacific, Caucasian, Hispanic, and Native American), economically disadvantaged students, ELL students, and ESE students, reach specified proficiency levels (U.S. Department of Education, 2002). If all the AYP targets were not met, the entire school failed (Fusarelli, 2004). States set criteria for the percentage of students who were expected to meet proficiency in math and reading each year. These percentages increased each year. By 2014, all students are expected to meet the standard (Florida Department of Education, 2006).

Although NCLB has expanded federal reporting requirements for states and local districts, states still retain control of many important decisions related to NCLB compliance, such as selecting content standards, choosing assessments, and setting academic achievement levels. Most states had state testing and accountability systems prior to 2001. Moreover, most states had worked for several years to coordinate curriculum, teacher professional development, and testing requirements. Few states abandoned their established accountability system when the new federal requirements were enacted. Instead, they added another, often disconnected, system of accountability on top of the state-approved system currently in place (Sunderman & Kim, 2004).
Because each state set its own performance standards, there were often wide discrepancies between states’ expectations and the selected standards. For example, in 2003, Florida was last in the nation, with only 18% of schools’ meeting AYP. There was a significant discrepancy between the state accountability system, which assigned letter grades to schools based on performance, and the meeting of federal AYP requirements. For example, 56% of schools in Florida earned the highest grade of “A,” but only 18% met federal AYP requirements (Linn, 2005).

NCLB included provisions for increased accountability, the use of scientific research to make educational decisions, and an increase in parental authority when school decisions significantly affected their children (Simpson et al., 2004). The goal of the legislation was “to ensure that all children had a fair, equal and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments” (U.S. Department of Education, 2009a, p. 1). To provide detailed information to parents, states and school districts were required to create “report cards.” These report cards provided information about the quality of education at their child’s school (U.S. Department of Education, 2008). Included in the report card were student achievement data broken down by AYP subgroup (U.S. Department of Education, 2008).

Educational researchers have questioned whether NCLB expanded the federal role through legislating additional requirements and sanctions or whether the legislation was not specific enough, since states set their own performance standards. According to Sunderman & Kim (2007), NCLB has expanded federal power to regulate education due to mandated AYP proficiency targets and federal selection of subgroups. By
allowing each state to determine levels of proficiency, some states have lowered their educational standards to ensure that their schools can attain AYP (Fusarelli, 2005).

**No Child Left Behind School Choice**

NCLB was the first means by which parental school choice was enacted. Prior to this, school choice plans had been district- or state-oriented and had loose ties to accountability as measured by standardized testing. The goal of previous state or local school choice plans was to improve both educational quality and equity by providing incentives for schools to compete for students. Additionally, disadvantaged students were afforded the opportunity to attend high-quality public schools (Hastings et al., 2007). In the decade before NCLB became law, students in a number of large cities in the United States (New York, Chicago, and Philadelphia) already had access to extensive school choice programs (Neild, 2005).

Unfortunately, a large percentage of disadvantaged students did not participate in previous school choice programs, e.g., in New York, Chicago, and Philadelphia, because school choice information was not available or they could not access the information in a form that they could understand. Clearly, school choice initiatives must include provisions for reaching out to diverse populations of parents who had not traditionally considered these options. Without this effort, school choice programs often failed the disadvantaged students for which they were created (Howell, 2006).

NCLB stipulated that children who attended Title 1 schools that failed to meet AYP requirements in two consecutive years had the opportunity to transfer to another public school (Arce et al., 2005). Giving parents the option to transfer their children to higher-performing schools was considered one way to force failing schools to meet federal
AYP standards as well as individual state accountability standards (Betebenner, Howe, & Foster, 2005).

NCLB provided a clearly defined relationship between school choice and test-based accountability. Prior to NCLB, choice and accountability were relatively distinct from one another (Betebenner et al., 2005). State and district school choice plans that were initiated prior to NCLB allowed movement of students without measuring the effects of the moves on school and individual student standardized testing performance. It was unclear whether there were a high number of students from disadvantaged backgrounds who pursued the option to switch schools and whether these plans were helping these students. In response, NCLB required states to develop procedures for ranking schools and to provide detailed reports of school performance to parents (Bast & Walburg, 2004).

School choice is the responsibility of the Local Education Agency (LEA), who is charged with notifying parents that a school has been identified for school improvement, corrective action, or restructuring (U.S. Department of Education, 2009b). The LEA was required to provide this information to parents in an easy-to-understand format. Once a student elected to transfer to a higher-performing school, the LEA was required to allow the transferred student to stay in the selected school until he or she had completed the highest grade. Certain circumstances, such as when transportation funds are limited or first choice options are closed, require that an LEA give priority to the lowest-achieving students from low-income families (U.S. Department of Education, 2009d).

The guidelines set forth in NCLB were clearly defined for the LEA. Unless a lesser amount is needed, an LEA must spend up to an amount equal to 20% of its Title 1, Part
A, allocation to meet NCLB requirements. Specifically, 5% must be allocated for choice-related transportation, 5% for supplemental educational services, and 10% for a combination of transportation and supplemental services (U.S. Department of Education, 2003).

A limitation of school choice is that it penalizes schools and their communities when students remain at “failing schools.” Many parents or guardians, specifically low-income and speakers of other languages, often lack the resources of time and knowledge of how the educational and governmental systems operate. This often results in economically disadvantaged students’ attending schools with higher percentages of economically disadvantaged students than prior to the enactment of NCLB (Arce et al., 2005).

**Characteristics of Choosers**

The consistently low number of students who use the school choice option has raised many questions. One such question is: Why do students choose to move, and what is it about these students that make them follow through? The Chicago Public Schools (CPS) have had extensive school choice programs for many years. There were several competing explanations for why students in this system who opted out of their assigned schools outperformed those who stayed. Distance to nearby schools was a strong predictor of the likelihood that a student would opt out of the assigned school (Cullen, Jacob, & Levitt, 2005). Evidence from the CPS study, which included a sample of 60,623 students in grades eight through twelve over a period of three years, suggests that academic increases for students who used the choice option were due to motivation level and parental involvement (Cullen et al., 2005). Interestingly, boys
(specifically African American males) were significantly less likely to graduate from high school than females.

Economically disadvantaged students who use school choice most often have parents who received school choice information in an easy-to-understand format, as required by NCLB legislation. Parents’ decisions about what schools to send their children to were not uniformly directed by test scores alone. This was true for all parents, not just those who used the school choice option (Hastings et al., 2007). Other factors that influenced parents were school reputation, safety, location, and curriculum (Betebenner et al., 2005). A study of the Charlotte-Mecklenburg Public School District, which included a sample of 6,328 non-school choice students and 10,134 NCLB school-choice students in grades five and eight, concluded that simplified information affects parents’ choices and preferences for African American and economically disadvantaged students (Hastings et al., 2007).

Parents of children who qualified for school choice provisions purport to care about the same features of schools, foremost among them academics, as do parents whose children already attend higher-performing public schools (Howell, 2006). When selecting an alternative public school for their child, parents in underperforming schools consistently choose schools with more advantaged and higher-performing students. They seek the perceived advantages of surrounding their children with high-achieving peers (Howell, 2006). Parents put academic achievement at the top of their list of priorities when choosing a school, presumably acting in their children’s best long-term interests (Bast & Walberg, 2004). Providing clear information on school test scores
within a choice plan increases the proportion of parents choosing higher-scoring schools for their children (Hastings & Weinstein, 2008).

Some parents choose schools based on location (convenience) and extracurricular activities (Bast & Walberg, 2004). The impact of information on choice behavior was greatest for families with higher-scoring schools in relative close proximity, implying that providing information is most effective when parents have a quality alternative within a reasonable distance (Hastings & Weinstein, 2008). The choice provisions of NCLB have introduced new competitive pressures in public education and have empowered disadvantaged parents to shape the educational lives of their children.

**School Choice and Student Achievement**

Prior to NCLB, several school districts already had experimented with school choice. When the relationship between school choice and student achievement is studied, the results are inconsistent. Results from the school choice program in CPS, which allows choice for at least half of the students in the district, indicated some positive effects for students. In this study, Cullen et al. (2005) established a correlation between opting out of the assigned school and choosing another school and higher educational attainment. In contrast, Betebenner et al. (2005) reported that there was no uniform benefit for those students who participated in choice in a large western school district with an extensive school choice program. The sample in this study included 402 fifth and sixth grade students. Thus, the belief that allowing choice would help academic achievement was not supported. The only students who showed a benefit from choice were in the lowest quartile growth, and this was observed only in mathematics. Also, it was noted that Caucasian and Hispanic parents elected school choice at a comparable rate (Betebenner et al., 2005). Hastings et al. (2007) reported that African American
students were about 15 percentage points less likely to elect school choice than comparison subgroups and that the decision to transfer did not improve performance for this subgroup.

After conducting field experiments on 115,716 students in 2003-2004 and 125,313 students in 2005-2006, Hastings and Weinstein (2008) noted that transferring a disadvantaged student to a school with high mean test scores did not result in statistically significant academic gains for that student. This was true for African American and economically disadvantaged students. Attending a higher-performing school had a positive impact when coupled with parents who were informed and were seeking improved academic achievement for their child (Hastings & Weinstein, 2008). Schools of choice tended to outperform public schools on a wide range of outcomes and for children from all socioeconomic backgrounds, meaning that the act of choosing, for whatever reason, led to children’s attending better schools (Bast & Walburg, 2004).

In a study of six districts, with a sample size of 4,155 students, there was no observable achievement gain across content areas as a result of changing schools for the total population. Achievement results for African American, Hispanic, and students with disabilities showed mixed results across the districts. Some showed statistical significance, but no clear patterns emerged overall for any particular subgroups (Zimmer, Gill, Razquin, Booker, & Lockwood, 2007).

In a study of 10,372 third through sixth graders who participated in an intra-district school option, Phillips et al. (2009) compared reading achievement for those who switched schools versus those who stayed in neighborhood schools. The researchers concluded that, for a majority of students, the choice to transfer had no impact on
reading achievement. They also found that students who switched schools were less likely to be Hispanic, economically disadvantaged, or English Language Learners. However, they did find gains for students who chose to move away from a low-performing school to attend a high-performing school. The choice of school was found to be more important than simply the choice to switch schools. Just switching to another school of similar achievement reportedly does little to improve student performance (Phillips et al., 2009). In a North Carolina study on intra-district choice and student achievement, Okpala, Bell, and Tuprah (2007) found significant differences in achievement scores of students in schools of choice, compared to those in traditional schools, on end-of-course reading tests at the middle school level. Based on mean scores of 48 students in grades six to eight, the schools of choice had higher mean scores than did traditional schools in reading achievement based on end-of-grade tests (Okpala et al., 2007). The study also found that African American and economically disadvantaged students were less likely to elect choice than other subgroups.

Hoxby (2002) reported that inter-district choice had a positive, statistically significant effect on achievement for eighth grade students across a district. The district scored 3.8 national percentage points higher in reading following a 1% increase in inter-district choice. When considering large groups and testing results, however, reallocation of students had little impact on the overall state or district average. Rather, it affected only the distribution of achievement across schools. When considering achievement test mean scores, struggling schools score lower and thriving schools score higher (Hanushek, Kain, Markman, & Rivkin, 2003). Thus, it remains unknown whether the overall choice policy improves district or state testing results.
NCLB School Choice, Student Achievement, and Demographics

NCLB is an important legislative action because it has expanded school choice to students who attended schools that were not meeting state proficiency requirements. This notion of choice was an important reason why NCLB was initiated, passed, and maintained. Supporters of school choice policies assume that allowing parents to choose higher-performing public school for their children will improve academic performance (Nicotera et al., 2007). Using a survey and semi-structured interviews with 19 parents of eighth graders, Neild (2005) found that parents believe that the school choice system offers their children the opportunity to attend schools with advantages not available at their previous school. These advantages include higher-performing peers, less disciplinary referrals, and additional extracurricular activities. When selecting an alternative public school for their child, parents consistently selected schools with more advantaged and higher-performing students (Howell, 2006).

In a case study of 264 school choice and 1,907 non-school choice elementary and middle school students in one district where NCLB school choice was offered, McCombs (2007) found that transferring did not positively affect performance or absolute gains in reading, when controlling for prior achievement and student background characteristics. However, students who performed below the mean gained more from transferring schools than those who scored above the mean. Also, receiving schools were found to have a significantly higher rate of Caucasian students and lower rate of economically disadvantaged students than sending schools.

In a study of 62,628 second to tenth graders, Nicotera et al. (2007) questioned whether students performed better when given the opportunity to transfer from low-performing to high-performing schools. These researchers found that students who
moved under the NCLB choice provision experienced an initial decline in reading achievement during the first school quarter, as measured by the Northwest Evaluation Association testing. The small boost in achievement growth that came later in the year did not compensate for the initial losses. Nicotera et al. (2007) also reported that students who did not change schools had faster achievement growth rates compared to those who transferred. Thus, the authors concluded that the goals of NCLB school choice did not appear to work as intended.

Researchers studied six urban school districts to determine the relationship between elementary school choice and reading achievement. The researchers concluded that, in all six districts, there were no positive or negative statistically significant results (Zimmer et al., 2007). Achievement results for African American and Hispanic students and for students with disabilities who participated in school choice varied across districts. One district out of the six, however, did show statistically positive results in reading gains for school choice students. Overall, however, there were no effects on reading achievement across subgroups. The authors cautioned that the results were based on a small sample and should lead to further study (Zimmer et al., 2007).

In a study of 55 tenth graders in one Florida district, Hall (2010) found that there was no statistically significant relationship between the variables of ELL status, ESE status, gender, race, and economically disadvantaged status and reading achievement gains, as measured by the FCAT, for students who selected or declined the school choice option. In addition, there was no statistically significant relationship between school choice and student achievement in reading for students who transferred from
their Title 1 schools, compared to students matched by ELL, ESE, gender, race, and socioeconomic status who elected to stay in their neighborhood school. In a study conducted in another Florida school district, Kirkland (2009) matched 103 transfer students with 103 students who had similar demographic characteristics who remained in their assigned schools. The results indicated that, after one year, there were no significant differences in reading achievement scores based on transfer status as compared to remaining in the assigned school. Also, this study reported that Caucasian students transferred at statistically significantly higher rates than Hispanic or African American students.

**Florida Comprehensive Assessment Test (FCAT)**

In 1996, educators in the state of Florida identified a core body of knowledge and skills that they felt students should have attained at each stage of their school career (Florida Department of Education, 2004a). This body of knowledge and skills is detailed in Florida’s Sunshine State Standards (SSS), which include seven content areas: mathematics, language arts, science, social studies, foreign language, health and physical education, and the arts (Florida Department of Education, 2004b). The SSS is divided into four grade level clusters, PreK-2, 3-5, 6-8, and 9-12, which are further divided into benchmarks for student knowledge and performance at each grade level. This standardization of state expectations was described as an “equitable system of student assessment and school accountability” (Florida Department of Education, 2002, p. 2)

During the same period, the Florida Educational Reform and Accountability Commission recommended that a statewide assessment system be developed to measure student progress as related to the SSS. This recommendation resulted in the
The primary purpose of the FCAT is to assess student achievement of the higher-order cognitive skills outlined in the SSS in mathematics, reading, writing, and science. The FCAT is a criterion-referenced test (CRT), and the 2008 FCAT contained a second part that is a nationally norm-referenced Stanford Achievement Test (SAT-10) that is used to compare the performance of Florida students in reading and mathematics to the rest of the nation. This norm-referenced portion was eliminated after the 2008 FCAT administration. Following administration and scoring, score reports are provided for school and student review. For the FCAT, scores are reported on a scale from 100-500. In addition, scores are also reported as achievement levels that range from 1 to 5, with 5 being the highest (Florida Department of Education, 2004b).

In addition to the scale scores and achievement levels, the FCAT also yields developmental scale scores for each test taker. These scores are designed to measure the learning gains of individual students as they progress through the grade levels. Developmental scale scores range from 0 to 3,000, and it is expected that these scores increase as student’s progress through the grades. A third grader typically scores near the lower end of the scale, and a tenth grader scores near the upper end of the scale. Developmental gain scores are often used to determine adequate student progress. The state has expected at least a one-year gain for each grade level, as presented in
Table 2-1. The state has defined AYP for students based on three criteria: (a) an increase of one achievement level from the previous year; (b) maintaining a level 3, 4, or 5 from the previous year; or (c) students at levels 1 and 2 demonstrating a one-year gain based on developmental scale scores (Florida Department of Education, 2004b).

Table 2-1. One-Year Gains in FCAT Developmental Scale Scores in Reading as set by the state of Florida

<table>
<thead>
<tr>
<th>Grade Level Change</th>
<th>Developmental Reading Scale Score Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd to 4th</td>
<td>230</td>
</tr>
<tr>
<td>4th to 5th</td>
<td>166</td>
</tr>
<tr>
<td>5th to 6th</td>
<td>133</td>
</tr>
<tr>
<td>6th to 7th</td>
<td>110</td>
</tr>
<tr>
<td>7th to 8th</td>
<td>92</td>
</tr>
<tr>
<td>8th to 9th</td>
<td>77</td>
</tr>
<tr>
<td>9th to 10th</td>
<td>77</td>
</tr>
</tbody>
</table>

The Reading FCAT SSS is divided into subtests. These include Information (25 questions), Literature (26 questions), Words and Phrases in Context (7 questions), Main Idea, Plot, and Purpose (28 questions), Comparisons and Cause/Effect (13 questions), and Reference and Research (3 questions; Florida Department of Education, 2007).

The results of the subtest scores are combined to provide the overall developmental scale score as shown in Table 2-2 (Florida Department of Education, 2007).

Table 2-2. Range of FCAT Developmental Scale Scores for each Achievement Level in Grade 4 Reading as set by the state of Florida

<table>
<thead>
<tr>
<th>Achievement Level</th>
<th>Developmental Scale Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>295-1314</td>
</tr>
<tr>
<td>Level 2</td>
<td>1315-1455</td>
</tr>
<tr>
<td>Level 3</td>
<td>1456-1689</td>
</tr>
<tr>
<td>Level 4</td>
<td>1690-1964</td>
</tr>
<tr>
<td>Level 5</td>
<td>1965-2638</td>
</tr>
</tbody>
</table>
Summary

The purpose of this study was to determine whether there is a relationship between the decision to elect school choice (following NCLB provisions) and student achievement. Previous research has demonstrated that, in some cases, choice has resulted in increased achievement. Such research also has found that parents choose to send their children to other schools when information is shared in an easy-to-understand format, test score information is understood, and the receiving school has a positive reputation (Betebenner et al., 2005; Hastings & Weinstein, 2008; Hastings et al., 2007) and that students who chose to move to other schools tend to have proximity to the choice school, are motivated to do well, and have involved parents (Cullen et al., 2005; Hastings & Weinstein, 2008).

Overall, however, the findings in regard to whether or not students who elect choice outperform those who remain in their zoned school are inconclusive. For example, Okpela et al. (2007) found that students who moved to choice schools outperformed, on end-of-year tests, students who remained behind. McCombs (2007) found that students who had scored below the mean showed the greatest improvement. In contrast, Kirkland (2009) and Hall (2010) found that moving to a choice school had no impact on achievement. McCombs (2007) also reported that choice had no impact on students who had initially scored above the mean. Finally, Nicotera et al. (2007) reported that students remaining at their zoned school had faster achievement growth rates than did those who transferred to choice schools.

Researchers have indicated that future studies should continue to focus on choice and its impact on achievement (Betebenner et al., 2005; Hall, 2010). McCombs (2007)
and Kirkland (2009) recommend that future research should compare the achievement gain scores of NCLB transfer students to those who have matched demographics and who remained in Title 1 schools. Typically, studies on school choice have been limited because they failed to examine the effects of choice policy on the students who remained in assigned neighborhood schools (Betebenner et al., 2005).

Overall, there is a gap in the literature on the relationship between NCLB school choice and student achievement for certain subgroups. In this regard, the current study, which focuses on fourth grade students, differs from that of Hall (2010), who focused on tenth graders. The current study also differs from that of Kirkland (2009) because it provides a comparison of transfer and non-transfer students, specifically in regard to each of the FCAT reading subtests.
CHAPTER 3
METHODOLOGY

This chapter presents the research design and methodology used in this study. The chapter includes the theoretical framework as it relates to the methodology of the study, research methodology, researcher qualifications and bias, participants, access and entry, variables, instrumentation, validity and reliability of the Florida Comprehensive Achievement Test (FCAT), and assumptions and limitations. The chapter concludes with a summary.

Theoretical Framework for Data Collection and Analysis

The theoretical framework for this study is positivism. Positivism assumes that there are social facts with an objective reality apart from the belief of individuals. Quantitative researchers perceive truth as something that describes an objective reality, separate from the observer and waiting to be discovered (Sale, Lohfeld, & Brazil, 2002). The positivist conception of science is rooted in the belief that objective reality exists and that it can be known only by objective means. This conception also proposes that subjectivity in knowledge does not lead to truth (Peca, 2000).

According to Johnson (2009), virtually no quantitative research methodologists currently use the term positivist to refer to their work (and they have not for quite a long time). The term postpositivism, rather than positivism, shows that a researcher is cognizant of changes that have occurred over the past 75 years in the philosophy of social science and research methodology. Most current researchers, however, tend to hold more moderate positions with respect to varied research methodologies (Johnson, 2009). For this study, the researcher collected and analyzed student performance data to determine whether using school choice had an impact on student academic
performance, while remaining cognizant that there are factors which effect achievement that cannot be measured.

**Research Methodology**

The researcher used descriptive statistics to calculate Reading FCAT scores for 4th grade school choice students at receiving schools and for those who elected to remain at their zoned school. The Reading FCAT mean developmental gain scale scores were categorized by student demographic information, including economically disadvantaged status, ESE status, gender, ELL status, and race. This post-hoc data set included the 2008 and 2009 Reading FCAT developmental scores. Additional variables included the FCAT subtests Information; Literature; Words and Phrases; Main Idea, Plot and Purpose; Comparison and Cause/Effect; and Reference and Research. A level of significance of .05 was used, and all tests were two-sided. All analysis was performed using SAS, Version 9.2.

Research question 1 required comparison group testing. First, chi-square tests were used for the binary variables (male/female, ESE/non-ESE, and economically disadvantaged/non-economically disadvantaged). For the binary variables, the null hypothesis can be written as $H_0$: $\pi_N = \pi_S$. Here, $\pi$ = percentage of male/female, percentage of ESE (non-gifted)/non-ESE, and percentage of economically disadvantaged/non-economically disadvantaged ($N$ = non-School Choice and $S$ = School Choice). Second, categorical groups (race/ELL status) were compared using chi-square tests. For the categorical groups, the test of hypothesis can be written as $H_0$: Group and (race/ELL) are not related, and $H_a$: Group and (race/ELL) are related. Third, numerical variables (overall reading mean/subscale scores) were compared using t-tests. For the numerical variables, the test of the null hypothesis can be written as $H_0$: 
\[ \mu_N = \mu_S. \] Here, \( \mu \) = overall reading mean/subscale means (\( N = \) non-School Choice and \( S = \) School Choice).

Research questions 2 and 3 required the use of bivariate testing and regression analysis to identify predictors related to the reading achievement in 2008 and 2009. First, predictors that were binary were tested using \( t \)-tests. For the binary variables, the null hypothesis can be written as \( H_0: \mu_1 = \mu_2 \). Here, \( \mu \) = overall reading mean (1 = male, 2 = female; 1 = non-economically disadvantaged, 2 = economically disadvantaged; 1 = non-ESE, 2 = ESE (non-gifted); 1 = non-School Choice, 2 = School Choice). Second, categorical predictors were tested using Analysis of Variance (ANOVA) with a follow-up multiple comparisons Tukey-Kramer procedure. For the categorical predictors, the null hypothesis can be written as \( H_0: \mu_1 = \mu_2 = \ldots \mu_K \). Here, \( \mu \) = overall reading mean (1 = African American, 2 = Haitian Creole, 3 = Hispanic, 4 = other, 5 = Caucasian, and 1 = LF, 2 = LY, 3 = LZ, 4 = ZZ). Third, the correlation between 2008 Reading and 2009 Reading was computed using the formula, \( H_0: \rho = 0 \).

Finally, research questions 2 and 3 required the use of multivariate testing (regression analysis). First, the equation for research question 2 can be written as \( Y = \beta_0 + \beta_1 \) (gender) + \( \beta_2 \) (race) + \( \beta_3 \) (ESE status) + \( \beta_4 \) (ELL status) + \( \beta_5 \) (economically disadvantaged status), and the null hypothesis can be written as \( H_0: \beta = 0 \). Here, \( Y \) = overall reading mean in 2008. Second, the equation for research question 3 can be written as \( Y = \beta_0 + \beta_1 \) (reading 2008) + \( \beta_2 \) (gender) + \( \beta_3 \) (race) + \( \beta_4 \) (ESE status) + \( \beta_5 \) (ELL status) + \( \beta_6 \) (economically disadvantaged status) + \( \beta_7 \) (group), Here, \( Y \) = overall reading mean in 2009.
Researcher Qualifications and Bias

The researcher has worked in a variety of school settings. Currently, the researcher serves as principal of a Title I elementary school. Students at this school have the opportunity to transfer to a higher-performing school, based on NCLB school choice requirements. The researcher’s previous work included serving as a principal of a receiving school. Both experiences made this researcher aware of the issue of choice and the question about whether changing schools makes a difference in student performance. During the researcher’s teaching career, which included work with elementary and middle school students, the importance of peers, school environment, and their impact on student performance was noted. The researcher’s graduate classes at Georgia State University, with a focus on inner-city students, increased his interest in school choice. The classes that the researcher took in the University of Florida Educational Leadership doctoral program, such as Quantitative Research I and II and Research Design, led the researcher to realize that the relationship between school choice and student achievement could be analyzed from a quantitative perspective. The researcher has worked as a school administrator in both high-performing and Title 1 schools and, as such, did not enter the study with any bias. Creswell (2008) reminds us that researchers need to take an objective and unbiased approach when conducting quantitative research. As a researcher and school administrator, the researcher has the experience to conduct and complete the proposed study.

Participants

The target population for this study includes fourth grade students who selected the NCLB school choice option during the 2008-09 school year and attended a receiving school as well as those who were offered the option but elected to remain at their zoned
school during this school year. The accessible population for this study was elementary school-aged students from a Southwest Florida public school system. This district is comprised of 29 elementary schools (PreK-5), 10 middle schools (6-8), 8 high schools (9-12), and one small (under 175 students K-12) K-12 school. The student racial make-up for the school district is approximately 43% Hispanic, 41% Caucasian, 6% Haitian Creole, 6% African American, 3% Mixed, 1% Asian, and .3% Native American. Approximately 52% of the school districts’ student population is categorized as economically disadvantaged and qualifies for the free and reduced-cost lunch program.

Because the purpose of this study was to examine the relationship between school choice and student reading achievement, the students must have taken the 2007-08 Reading FCAT as third graders and the 2008-09 Reading FCAT as fourth graders. All fourth grade school choice students from the 2008-09 school year were part of the analysis as well as 2008-09 fourth graders who were eligible for choice but stayed at their zoned school.

**Access and Entry**

After receiving approval from the University of Florida Institutional Review Board and permission from the school district, the researcher contacted the school system’s Director of Assessment and Data Management to obtain student scores. The scores were sorted by demographics and subtest results on two Excel spreadsheets.

**Variables of the Study**

Data collection included analysis of student demographic data and subtest data. Student demographic variables included economically disadvantaged status, ESE status, gender, ELL status, and race. Subtests included the Information subtest,
Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest.

**Instrumentation**

The FCAT was used to quantitatively measure student performance. In this study, student FCAT developmental scale scores in reading from the 2007-08 and 2008-09 school years for students who elected the NCLB school choice option and those who stayed in their zoned schools were analyzed and compared.

**Validity and Reliability of the FCAT**

**Validity**

According to the Florida Department of Education (2004a), the FCAT is a technically sound and valid instrument that meets or exceeds professional standards for standardized achievement tests. The FCAT is intended to measure a student's achievement of skills and content described in the SSS. Content validity, concurrent validity, and construct-related validity have been substantiated. Specifically, the FCAT has high content validity. Item specifications were developed, items were pilot tested with randomly selected students, items were field tested to determine psychometric properties, and items were reviewed for cultural, language, and gender bias (Florida Department of Education, 2007). The FCAT demonstrates criterion-related validity with the Stanford 9 test. However, the two tests do not provide the same information (Florida Department of Education, 2007). The FCAT has construct-related validity. This was established through convergent and discriminant analyses (Florida Department of Education, 2007). These state generated reports lack the statistical information necessary to quantify findings related to validity. Shermis and Long (2009) calculated the reliability, convergent, and discriminant validity coefficients.
to assess the construct validity for the FCAT’s multiple-choice and essay/extended-response items. The structural equation model (SEM) analysis provided support for both the convergent and discriminant validity of the test scores. In a study of performance on the reading portion of the FCAT, Schatschneider et al. (2004) provided substantial evidence for the construct validity of the FCAT test as a measure of reading comprehension. Scores on the FCAT consistently identify children who are both better readers (text level fluency) and who have more verbal knowledge and reasoning skills. FCAT reading comprehension levels were also consistent with reading comprehension scores from the SAT9 test, which reports a comparison of performance with a national sample of students.

Reliability

Reliability for internal consistency was tested using Cronbach’s alpha and item response theory (IRT) marginal reliabilities for the FCAT-SSS test. Reported reliability coefficients confirm that the FCAT is a reliable test for assessment of educational achievement (Florida Department of Education, 2007). According to the FCAT technical report, marginal reliabilities indicate that FCAT scores have reliabilities similar to those of other standardized and statewide tests. Test scores can fluctuate; therefore, the FCAT should be viewed as only one indication of student achievement (Florida Department of Education, 2006). These reports fail to share statistical information necessary to quantify the findings related to reliability.

Assumptions and Limitations

Assumptions

For this study, several assumptions were made. First, this study looked at a specific population of elementary-aged students identified as eligible for the NCLB
school choice program. It was assumed that the students who used the NCLB school choice option were properly identified and resided within the school boundary of the sending school. It was also assumed that the assigned teaching personnel had appropriate teaching credentials for teaching the assigned grade level and students. Another assumption was that, because the school district had adopted curriculum materials for use in general education classrooms, all students were taught using a similar curriculum and had access to similar resources and instructional materials.

Because the FCAT was used as the measure of student achievement, it was assumed that the school personnel who administered the FCAT received training, used standardized procedures, and allowed students to complete the examination independently. In addition, it was assumed that the score reported in the district’s database had been recorded accurately.

Limitations

The students selected for this sample include all fourth grade NCLB school choice students and those who remained in their zoned school who took the FCAT in both 2008 and 2009. Due to the lack of randomization in the selection of the sample, the ability to generalize the findings is limited.

Summary

The underlying premise of the NCLB school choice provision was that disadvantaged students would benefit from attending high-performing schools (Nicotera et al., 2007). The purpose of this retrospective data analysis was to determine whether the decision to elect school choice made a difference in achievement, as evidenced by FCAT Reading Gain Scores in one Florida school district. This study analyzed results for student subgroups, including economically disadvantaged status, ESE status,
gender, ELL status, and race. Students who used NCLB school choice were compared to eligible students who elected to remain in their zoned school.
CHAPTER 4
RESULTS AND ANALYSIS OF DATA

This chapter presents the results of the research study. The purpose of the data analysis was to assess the impact of the NCLB school choice option on student academic performance from 2007 to 2009 in one suburban district in Southwest Florida. The researcher analyzed reading test scores for students who used the NCLB school choice option and those who remained in their zoned schools. The developmental scale scores from the third and fourth grade FCAT were used to measure student achievement.

The results and analysis for the following research questions were addressed:

1. What is the relationship between School Choice and non-School Choice, when compared by gender, race, ELL status, ESE status, economically disadvantaged status, Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest of the Reading FCAT?

2. What were the predictors of reading achievement in 2008?

3. What were the predictors of reading achievement in 2009?

Descriptive Analysis

The sample group in this study included 953 students who were third graders in 2008 and fourth graders in 2009. To be included in the sample group, each student had to generate a score on both the 2008 FCAT as a third grader and the 2009 FCAT as a fourth grader. In addition, the student had to be eligible for NCLB school choice and either select the option to transfer (School Choice) or remain at their zoned school (non-School Choice). In this study, 859 students were identified as non-School Choice, and
94 students were identified as School Choice. All eligible students in the district were included in the study results. Table 4-1 provides the demographic information for the group.

Table 4-1. Overall Student Demographics

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>438</td>
<td>46</td>
</tr>
<tr>
<td>Male</td>
<td>515</td>
<td>54</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
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<tr>
<td>African American</td>
<td>66</td>
<td>7</td>
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<tr>
<td>Haitian Creole</td>
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<td>14</td>
</tr>
<tr>
<td>Hispanic</td>
<td>654</td>
<td>69</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>2</td>
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<tr>
<td>Caucasian</td>
<td>79</td>
<td>8</td>
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<tr>
<td>ELL Status</td>
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<td>LF (follow-up ELL)</td>
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<td>LY (active ELL)</td>
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<tr>
<td>LZ (former ELL)</td>
<td>116</td>
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<tr>
<td>ZZ (non-ELL)</td>
<td>443</td>
<td>46</td>
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<td>ESE Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>749</td>
<td>79</td>
</tr>
<tr>
<td>Yes (non-gifted)</td>
<td>204</td>
<td>21</td>
</tr>
<tr>
<td>Economically</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disadvantaged Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>146</td>
<td>15</td>
</tr>
<tr>
<td>Yes</td>
<td>807</td>
<td>85</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-School Choice</td>
<td>859</td>
<td>90</td>
</tr>
<tr>
<td>School Choice</td>
<td>94</td>
<td>10</td>
</tr>
</tbody>
</table>

Data Analysis

Research Question 1

What is the relationship between School Choice and non-School Choice, when compared by gender, race, ELL status, ESE status, economically disadvantaged status, Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest of the Reading FCAT? To address this question, comparison
group testing was completed for the binary (male/female, ESE (non-gifted)/non-ESE, economically disadvantaged/non-economically disadvantaged), categorical (race, ELL status), and numerical (overall reading mean/subscale scores) variables. The corresponding null hypothesis was developed to test the research question 1: $H_{o1}$: There will be no statistically significant relationships between School Choice and non-School Choice on gender, race, ELL status, ESE status, economically disadvantaged status, Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest as measured by the FCAT Developmental Scale Score in 2008 and 2009.

First, chi-square testing was used to compare 2008 non-School Choice and School Choice for the binary variables, as presented in Table 4-2. The percentages of students in each group were found to be not significantly different for the variables of Gender ($p = .862$) and ESE status ($p = .1749$), while differences for economically disadvantaged status were significant ($p = .0005$). In this case, 86% of non-School Choice students were economically disadvantaged compared with 72% of School Choice students. Due to significance levels above .05, the findings show that it was necessary to fail to reject the null hypothesis for the binary variables Gender and ESE status. For economically disadvantaged status, however, due to the significance level’s falling below .05, the null hypothesis for this binary variable was rejected.
Second, chi-square testing was used to compare 2008 non-School Choice and School Choice for the categorical variables, as shown in Table 4-2. The differences were significant for both variables, race \( (p < .0001) \) and ELL status \( (p < .0001) \). The percentage of Hispanic non-School Choice students was 71%, while the percentage of Hispanic School Choice students was 49%. Additionally, the percentage of classified ZZ (students not labeled ELL) non-School Choice students was 44%, while the percentage of ZZ School Choice students was 70%. Due to the significance levels’ falling below .05, the null hypothesis for the categorical variables of race and ELL status was rejected.
Third, \( t \)-tests were used to compare 2008 non-School Choice and School Choice for the numerical variables, as presented in Table 4-3. The percentage correct was significantly different for non-School Choice and School Choice on all variables (Overall Reading Mean, Comparison and Cause/Effect subtest, Main Idea subtest, Information subtest, Literature subtest, Reference and Research subtest, and Words and Phrases subtest) as evidenced by all \( p \) values of < .0001, with the exception of Words and Phrases, having a \( p \) value of .0003. This included an Overall Mean Reading Score of 1,249, with a standard deviation of 308.8 for non-School Choice. School Choice students had an Overall Mean Reading Score of 1,407.8, with a standard deviation of 296. Due to the significance level’s falling below .05, the null hypothesis for all numerical variables was rejected.

Table 4-3. 2008 Comparing Groups on Reading Achievement

<table>
<thead>
<tr>
<th>Overall Reading/Subtests</th>
<th>Non-School Choice M (SD)</th>
<th>School Choice M (SD)</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Reading</td>
<td>1249.1 (308.8)</td>
<td>1407.8 (296)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Comparison and Cause/Effect</td>
<td>.59 (.20)</td>
<td>.67 (.19)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Main Idea</td>
<td>.63 (.19)</td>
<td>.73 (.18)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Information</td>
<td>.63 (.20)</td>
<td>.73 (.17)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Literature</td>
<td>.60 (.19)</td>
<td>.69 (.18)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Reference and Research</td>
<td>.62 (.26)</td>
<td>.73 (.23)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Words and Phrases</td>
<td>.61 (.23)</td>
<td>.70 (.22)</td>
<td>.0003</td>
</tr>
</tbody>
</table>

**Research Question 2**

What were the predictors of reading achievement in 2008? This question required the use of bivariate testing and regression to identify predictors related to reading achievement. The results are shown in Table 4-4. The corresponding null hypothesis was developed for research question 2: \( H_0: \) There will be no statistically significant
relationships between the control variables student gender, race/ethnicity, economically disadvantaged status, ESE status, and ELL status and overall reading mean scores in 2008.

Table 4-4. Predictors of Reading Achievement in 2008

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>$M$ (SD)</th>
<th>$p$</th>
<th>multivariate value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1267.2 (302.7)</td>
<td>0.8221</td>
<td>.6162</td>
</tr>
<tr>
<td>Male</td>
<td>1262.7 (318.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American (a)</td>
<td>1262.2 (335.4)</td>
<td>&lt;.0001</td>
<td>.0013</td>
</tr>
<tr>
<td>Haitian Creole (a)</td>
<td>1228.3 (285.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic (a)</td>
<td>1245.9 (303.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (b)</td>
<td>1556.6 (423.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian (b)</td>
<td>1419.1 (296.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELL Status (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LF (b) (follow-up ELL)</td>
<td>1264.2 (286.2)</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>LY (a) (active ELL)</td>
<td>1092.5 (287.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LZ (b) (former ELL)</td>
<td>1233.9 (275.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZZ (c) (non-ELL)</td>
<td>1364.4 (299.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESE Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1273.6 (278.1)</td>
<td>.176</td>
<td>.0089</td>
</tr>
<tr>
<td>Yes (non-gifted)</td>
<td>1232.3 (409.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economically</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disadvantaged Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1361 (287.8)</td>
<td>&lt;.0001</td>
<td>.0852</td>
</tr>
<tr>
<td>Yes</td>
<td>1247.3 (312.1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Means with the same letter are not significantly different.

First, predictors that were binary were tested using $t$-tests. The test of hypothesis was used for gender, economically disadvantaged status, and ESE status. Gender mean scores were not significantly different ($p = .8221$; multivariate $p = .6162$). Females had a mean score of 1,267 with a standard deviation of 302.7, while males had a mean score of 1,262 with a standard deviation of 318.2. Economically disadvantaged status mean scores were significantly different ($p = .0001$; multivariate $p = .0852$). Students classified as non-economically disadvantaged had a mean score of 1,361 with a
standard deviation of 287.8, while economically disadvantaged students had a mean score of 1,247.3 with a standard deviation of 312.1. ESE status scores were not significantly different ($p = .176$; multivariate $p = .0089$). Students classified as non-ESE had a mean score of 1,273.6 with a standard deviation of 278.1, while ESE (non-gifted) students had a mean score of 1,232.3 with a standard deviation of 409.1. Due to a level of significance above .05, the researcher fails to reject the null hypothesis for the binary variables gender and ESE status. Due to the level of significance falling below .05, the null hypothesis for the binary variable economically disadvantaged status was rejected.

Second, categorical predictors were tested using ANOVA with a follow-up multiple comparisons Tukey-Kramer procedure. Scores for race were found to be significantly different ($p < .0001$; multivariate $p = 0.0003$). Specifically, scores for African American ($M = 1,262, SD = 335.4$), Haitian Creole ($M = 1,228, SD = 285.4$), and Hispanic ($M = 1245.9, SD = 303.3$) subgroups were significantly different from scores for Other ($M = 1,556.6, SD = 423.1$) and Caucasian ($M = 1,419, SD = 296.3$). ELL status scores were also found to be significantly different ($p < .0001$; multivariate $p < .0001$). Specifically, scores for LY ($M = 1,092, SD = 287.5$) differed significantly from scores for LF ($M = 1,264.2, SD = 286.2$) and LZ ($M = 1,233.9, SD = 275.1$). In addition, scores for ZZ ($M = 1,364.4, SD = 299.4$) were significantly different from scores for all other ELL classifications. Due to levels of significance falling below .05, the null hypothesis for the categorical variables of race and ELL status was rejected.

**Research Question 3**

What were the predictors of reading achievement in 2009? This question required the use of bivariate testing and regression to identify predictors related to reading achievement. The results are shown in Table 4-5. The corresponding null hypothesis
was developed for research question 3: $H_0_3$: There will be no statistically significant relationships between the control variables student gender, race/ethnicity, economically disadvantaged status, ESE status, and ELL status, overall reading mean scores in 2008, and overall reading mean scores in 2009.

Table 4-5. Predictors of Reading Achievement in 2009

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Correlation</th>
<th>$p$</th>
<th>multivariate $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 Overall Reading</td>
<td>.78</td>
<td>&lt;.0001</td>
<td>.4450</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>$M$ (SD)</th>
<th>$p$</th>
<th>multivariate $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1520 (239.7)</td>
<td>.0042</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Male</td>
<td>1468.9 (310.1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race (1)</th>
<th>$M$ (SD)</th>
<th>$p$</th>
<th>multivariate $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American (a)</td>
<td>1430.2 (315.1)</td>
<td>&lt;.0001</td>
<td>.0226</td>
</tr>
<tr>
<td>Haitian Creole (a)</td>
<td>1469.1 (284.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic (a)</td>
<td>1485.6 (271.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (b)</td>
<td>1671.3 (267.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian (b)</td>
<td>1600 (289.7)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELL Status</th>
<th>$M$ (SD)</th>
<th>$p$</th>
<th>multivariate $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF(a) (follow-up ELL)</td>
<td>1467.2 (289.6)</td>
<td>&lt;.0001</td>
<td>.1173</td>
</tr>
<tr>
<td>LY (b) (active ELL)</td>
<td>1379.6 (245.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LZ (a) (former ELL)</td>
<td>1462.3 (269.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZZ (c) (non-ELL)</td>
<td>1569.2 (275.8)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ESE Status</th>
<th>$M$ (SD)</th>
<th>$p$</th>
<th>multivariate $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1498.3 (246.9)</td>
<td>.3286</td>
<td>.5283</td>
</tr>
<tr>
<td>Yes (non-gifted)</td>
<td>1470.8 (380.7)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Economically Disadvantaged Status</th>
<th>$M$ (SD)</th>
<th>$p$</th>
<th>multivariate $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1566.4 (247.1)</td>
<td>.0002</td>
<td>.6103</td>
</tr>
<tr>
<td>Yes</td>
<td>1479 (284.8)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School Choice Status:</th>
<th>$M$ (SD)</th>
<th>$p$</th>
<th>multivariate $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Choice</td>
<td>1580.6 (228.9)</td>
<td>.0002</td>
<td>.445</td>
</tr>
<tr>
<td>Non-School Choice</td>
<td>1482.8 (284.5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Means with the same letter are not significantly different.

First, predictors that were binary were tested using $t$-tests. The test of the hypothesis was used for gender, economically disadvantaged status, and ESE status.

Gender mean scores were significantly different ($p = .0042$; multivariate $p = <.0001$).

Females had a mean score of 1,520 with a standard deviation of 239.7, while males had
a mean score of 1,468 with a standard deviation of 310.1. Economically disadvantaged status mean scores were significantly different ($p = .0002$; multivariate $p = 0.6103$). Students classified as non-economically disadvantaged had a mean score of 1,566.4 with a standard deviation of 247.1, while economically disadvantaged students had a mean score of 1,479.3 with a standard deviation of 284.8. ESE status scores were not significantly different for those classified as ESE (non-gifted) or non-ESE ($p = .3286$; multivariate $p = .5283$). Students classified as non-ESE had a mean score of 1,498.3 with a standard deviation of 246.9, while ESE (non-gifted) students had a mean score of 1,470.8 with a standard deviation of 380.7. Due to levels of significance falling below .05, the null hypothesis for the binary variables gender and economically disadvantaged status was rejected. Due to the level of significance above .05 for the binary variable ESE status, the researcher fails to reject the null hypothesis.

Second, categorical predictors were tested using ANOVA with a follow-up multiple comparisons Tukey-Kramer procedure. Scores for race were found to be significantly different ($p = <.0001$; multivariate $p = .0226$). Specifically, scores for African American ($M = 1,430.2$ with a standard deviation of 315.1), Haitian Creole ($M = 1,469.1$, $SD = 284.6$), and Hispanic ($M = 1,485.6$, $SD = 271.5$) subgroups were significantly different from scores for Other ($M = 1,671.3$, $SD = 267.9$) and Caucasian ($M = 1,600$, $SD = 289.7$). ELL status scores also were found to be significantly different ($p < .0001$; multivariate $p < .1173$). Specifically, scores for LY ($M = 1,379.6$ $SD = 245.6$) differed significantly from LF ($M = 1,467.2$, $SD = 289.6$) and LZ ($M = 1,462.3$, $SD = 269.5$). In addition, scores for ZZ ($M = 1,569.2$, $SD = 275.8$) were significantly different from
scores for all other ELL classifications. Due to levels of significance falling below .05, the null hypothesis for the categorical variables race and ELL status was rejected.

Third, the 2008 Overall Reading score was computed and found to have a correlation of .78 with the 2009 Overall Reading score ($p < .0001$; multivariate $p = .4450$). Because the multivariate $p$ was greater than .05, the researcher fails to reject the null hypothesis for the variable overall reading score. Table 4-6 shows the comparison between non-School Choice and School Choice in 2009 on the Overall Reading Mean Score and subtests. Because all of the $p$ values were below .05, it is clear that there was a statistical difference between non-School Choice and School Choice scores.

<table>
<thead>
<tr>
<th>Overall Reading/Subtest</th>
<th>Non-School Choice M (SD)</th>
<th>School Choice M (SD)</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Reading</td>
<td>1482.8 (284.5)</td>
<td>1580.6 (228.9)</td>
<td>.0002</td>
</tr>
<tr>
<td>Comparison and Cause/Effect</td>
<td>.54 (.52)</td>
<td>.60 (.56)</td>
<td>.0066</td>
</tr>
<tr>
<td>Main Idea</td>
<td>.56 (.19)</td>
<td>.61 (.19)</td>
<td>.004</td>
</tr>
<tr>
<td>Information</td>
<td>.55 (.21)</td>
<td>.61 (.20)</td>
<td>.0078</td>
</tr>
<tr>
<td>Literature</td>
<td>.57 (.19)</td>
<td>.65 (.17)</td>
<td>.002</td>
</tr>
<tr>
<td>Reference and Research</td>
<td>.61 (.30)</td>
<td>.73 (.25)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Words and Phrases</td>
<td>.67 (.24)</td>
<td>.74 (.21)</td>
<td>.0016</td>
</tr>
</tbody>
</table>

**Summary**

The findings indicated that there are significant differences related to school choice decisions based on demographic variables. In regard to race, Hispanic students accounted for 46% of School Choice students and 71% of non-School Choice students. In contrast, Caucasian students accounted for 23% of School Choice students and only 7% of non-School Choice students. For ELL status, ZZ (non-ELL status) students accounted for 70% of School Choice students and 44% of non-School Choice students.
In contrast, LY students accounted for only 9% of School Choice students and 26% of non-School Choice students. Students identified as economically disadvantaged accounted for 72% of School Choice students and 86% of non-School Choice students. In contrast, students identified as non-economically disadvantaged accounted for 28% of School Choice students and only 14% of non-School Choice students. Additionally, because there was a high correlation (.78) and multivariate p value of .4450 between overall Reading scores from 2008 to 2009, it was determined that the school choice decision for the entire group did not significantly improve student reading performance.
CHAPTER 5
CONCLUSIONS

An important component of NCLB is that all students have an opportunity to attend a higher-performing school if their current school is designated as needing improvement (Simpson et al., 2004). Attending a higher-performing school may be preferred, but there has been limited researched focused on two important questions: First, how will school choice affect school quality? (Hastings et al. 2005). Second, how will school choice affect student achievement? (Hoxby, 2002).

This study examined the effects of NCLB school choice on reading achievement for elementary-aged students in one Southwest Florida school district. Kirkland (2009) stated that the relationship between NCLB school choice and student achievement should be investigated. Similarly, other researchers recommended research that focused on the relationship between student achievement and school choice (Hall, 2007, 2010; McCombs, 2007; Phillips et al., 2009). For this study, the hypothesis was that the School Choice group would outperform the non-School Choice group on overall reading achievement gains, as measured by the 2008 and 2009 Reading FCAT developmental scale scores. In addition, it was hypothesized that demographic variables would affect participation in school choice and reading achievement scores and gains.

Summary of Results

This study was guided by three research questions and their corresponding null hypothesis. In the discussion below, each null hypothesis is included with the corresponding research question and results of the data analysis.
Research Question 1. What is the relationship between School Choice and non-School Choice, when compared by gender, race, ELL status, ESE status, economically disadvantaged status, Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest of the Reading FCAT?

Ho1: There will be no statistically significant relationships between School Choice and non-School Choice on gender, race, ELL status, ESE status, economically disadvantaged status, Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest as measured by the FCAT developmental Scale Score in 2008 and 2009.

When considering demographic groups, the analysis revealed that the percentages of students that used the school choice option were significantly different from the percentages for non-School Choice for economically disadvantaged status, race, and ELL status. Each of these variables had p values that fell below .05, causing the null hypothesis to be rejected. In contrast, the demographic variables of gender and ESE status had p values greater than .05, making it necessary to fail to reject the null hypothesis for gender and ESE status.

When considering 2008 subtests, the analysis revealed that there were significant differences between School Choice and non-School Choice students on all subtests. School Choice students scored higher on all measures (Information subtest, Literature subtest, Words and Phrases in Context subtest, Main Idea, Plot, and Purpose subtest, Comparisons and Cause/Effect subtest, and Reference and Research subtest), and this
was found to be significant, as evidenced by all \( p \) values that fell below .05. Thus, the null hypothesis was rejected for all subtest measures.

Research Question 2. What were the predictors of reading achievement in 2008?

\( H_0^2: \) There will be no statistically significant relationships between the control variables student gender, race/ethnicity, economically disadvantaged status, ESE status, and ELL status and overall reading mean scores in 2008.

Bivariate testing and regression were used to identify predictors related to reading achievement. When considering 2008 demographic groups, the analysis revealed that the mean scores of students who used the school choice option were significantly different from those of non-School Choice for economically disadvantaged status, race, and ELL status. Each of these variables had \( p \) values falling below .05, causing the null hypothesis to be rejected. In contrast, the demographic variables of gender and ESE status had \( p \) values greater than .05, making it necessary to fail to reject the null hypothesis for gender and ESE status when considering reading mean scores in 2008.

Research Question 3. What were the predictors of reading achievement in 2009?

\( H_0^3: \) There will be no statistically significant relationships between the control variables student gender, race/ethnicity, economically disadvantaged status, ESE status, and ELL status and overall reading mean scores in 2009.

Bivariate testing and regression were used to identify predictors related to reading achievement. When considering 2009 demographic groups, the analysis revealed that the mean scores of students using the school choice option were significantly different from those for non-School Choice for gender, economically disadvantaged status, race, and ELL status. Each of these variables had \( p \) values falling below .05, causing the null
hypothesis to be rejected. In contrast, the demographic variable of ESE status had \( p \) values greater than .05, making it necessary to fail to reject the null hypothesis for ESE status when considering reading mean scores in 2009.

Comparison group testing indicated that there was no significant difference in overall reading gain scores between the two groups of students, School Choice and non-School Choice, as measured by their 2009 reading developmental scale score in relation to their 2008 reading developmental scale score. Because no significant difference was found (multivariate \( p \) value < .4450; correlation = .78), the null hypothesis was rejected for the Overall Reading. While there was a wide gap between the two groups in overall reading mean scores, School Choice students displayed no significant difference in reading gain scores as compared to non-School Choice students.

**Limitations of the Study**

The student sample in this study consisted of 953 students who received scores on the FCAT Reading test, as third graders in 2008 and fourth graders in 2009, in one suburban Southwest Florida school district. Of the students, 94 used the NCLB school choice option, and 859 students elected to remain at their zoned school. This sample represents all eligible students with test scores during the period 2007 to 2008 and 2008 to 2009. The number of students in the School Choice group, 94, is relatively small when compared to the total eligible sample, 953. There might not have been enough school choice sample participants to detect statistically significant differences, thus a Type II error could have been present.

Academic gains were measured by the differences between the students’ developmental scale scores in reading from the 2008 FCAT test and the 2009 FCAT
test. This measure is limiting because the FCAT test measured performance only during those two testing periods. Using additional measures of student performance, such as grades, end-of-course examinations, and/or norm referenced tests, may have provided additional insight. In addition, using only specified grade levels and years decreased the ability to draw conclusions beyond the selected sample. This study could have been enhanced by increasing the number of grade levels and using information from other districts to increase sample sizes. School differences and issues related to curriculum delivery and support services were beyond the scope of this investigation. Additionally, the reasons that students selected School Choice or non-School Choice were not known.

**Implications**

Although research related to the NCLB school choice option and achievement has shown mixed results (Hall, 2010; Kirkland, 2009; Nicotera et al., 2007; U.S. Department of Education, 2007; Zimmer et al., 2007), it is clear that federal policymakers continue to support school choice legislation. Prior to NCLB, school choice and accountability for test results were not measured or considered (Betebenner et al., 2005). Lawmakers relied on the premise that providing parents with the option to transfer their children to higher-performing schools was one way to force failing schools to meet standards (Betebenner et al., 2005).

The findings in this study add to the mixed results presented in the literature related to NCLB Choice. The overall group performance in reading did not improve due to school choice. This study found that subgroups, such as Caucasian and non-economically disadvantaged, used school choice in direct contrast to the federal goal of providing choice for disadvantaged students. Perhaps policymakers should pay
particular attention to the percentages of students in each subgroup who select school choice and fund additional studies to determine growth on achievement measures.

**Recommendations**

This study investigated the academic achievement of students who participated in school choice by transferring from their zoned school and enrolling in a higher-performing school, as determined by NCLB guidelines. Additional research is needed to establish the relationship between the use of school choice and improved student academic achievement.

This study focused on one suburban district in Southwest Florida and the academic achievement of students who chose to transfer under NCLB guidelines. By looking at only the years 2007-2009 and the cohort that participated in testing both years, the number of students available who selected school choice was limited to 94. Replicating this study in other districts and in other grade levels would significantly increase the student sample. A larger sample may uncover further differences in academic achievement that were not detected in this study. Increasing the number of participants also could introduce a greater variety of demographic factors, making it possible to better examine the interaction between student subgroups and academic achievement and the findings more generalizable.

Future research also could use qualitative methods to investigate instructional effectiveness at choice and non-choice schools. Interviews with stakeholders (parents, teachers, students, administrators, and reading coaches) at high- and low-gain schools could be conducted to determine the factors that contribute to the differences between these schools. Also, instructional observations at choice and non-choice schools could be conducted to describe the quality and nature of reading instruction and level of
support provided to targeted students. Exploring parent education level as an additional variable could help explain differences in selection of school choice and academic gains for certain groups of students. Additionally, research could explore the reasons for significant differences between the performance, in 2009, between males and females, who had nearly identical mean scores in 2008. Finally, future research could examine why parents elect school choice for their children and the motivations that drive their decisions.

Conclusions

The purpose of this study was to determine whether NCLB school choice affects student reading achievement when comparing students who used school choice to those who declined the opportunity. FCAT Developmental Scale Scores were analyzed to compute reading mean scores for students during the 2007-2008 and 2008-2009 school years. The results of this study indicate that there is no evidence to support the claim that school choice significantly affects academic achievement in reading. Students in both the School Choice and non-School Choice groups made statistically comparable gains on the Reading FCAT from 2008-09. While students in both groups made comparable gains, it is concerning that students who elected School Choice scored at a statistically significant higher rate than non-School Choice students during both testing periods and on all subtests. Students classified as Caucasian, non-economically disadvantaged, and non-ELL scored at a statistically significant higher rate than economically disadvantaged, African American, Hispanic, Haitian Creole, and active ELL in both years. While all subgroups are making comparable gains, it is clear that the achievement gap is not closing. This policy does not appear to be helping improve the academic performance of either group (school choice and non-school choice). The
results question whether the enormous financial commitment made by policy makers is worthwhile.

Not surprisingly, the study results indicated that subgroups select school choice at varied rates. For example, for the subgroup of race, Caucasian students were more likely to select school choice than were Hispanic students. Students classified as ZZ (non-ELL) were more likely to select school choice than those identified as LF, LY, or LZ. Students identified as non-economically disadvantaged were more likely to select school choice than those identified as economically disadvantaged.

It is important to remember that the intent of federal NCLB legislation was that all students have an opportunity to attend higher-performing schools if their current school was designated as needing improvement (Simpson et al., 2004). Specifically, the legislation gave disadvantaged students the opportunity to attend high-quality public schools (Hastings et al., 2007). Unfortunately, this study shows the opposite to be true. Students identified as economically disadvantaged, with ELL classifications, and certain racial groups (African American and Hispanic) transferred at significantly lower rates than did comparison groups. Arce et al. (2005) reported that the legislation often caused low-income students to attend schools with higher percentages of disadvantaged students than prior to the enactment of NCLB. It appears that the subgroups who took advantage of this legislation included those who were the least disadvantaged. Clearly, state and federal policymakers should fund studies to examine both the percentages of students electing school choice in each AYP subgroup and the academic performance of these students. Simply implementing a federal policy, such as NCLB School Choice, without evaluating effectiveness does little to help student performance or even support
the continuation of the policy. Determining the impact on each subgroup should be a mandatory part of federal and state program evaluation.
April 6, 2011

TO:  
Brian Castellani  
579 Raven Way  
Naples, FL 34110

FROM:  
Ira S. Fischler, PhD; Chair  
University of Florida  
Institutional Review Board 02

SUBJECT:  
Exemption of Protocol #2011-U-0291  
The Impact of School Choice on Student Reading Achievement During the Era of No Child Left Behind (NCLB)

SPONSOR:  
None

Your protocol submission has been reviewed by the Board. The Board has determined that your protocol is exempt based on the category listed below:

45 CFR 46.101(b)(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Should the nature of your study change or if you need to revise this protocol in any manner, please contact this office before implementing the changes.

IF:dl
March 22, 2011

Mr. Brian Castellani

Re: Research Request
   The impact of school choice on reading achievement

Dear Mr. Castellani:

The above reference research request has been approved by the Research and Data Committee. It is now your obligation to conduct the study as outlined in the proposal. Your approval is subject to the following special instructions designated by the committee:

(a) Information is collected anonymously, and no personally identifiable information is obtained from or reported on any individual student, person, group, or organization.
(b) If the district is to be identified in any manner in the final report of an approved study, prior permission must be secured.
(c) The cooperating organization or individual will furnish a copy of the final results to the district.

Research conducted on accepted proposals must be actively underway within 2 years of the date of acceptance. Researchers must request an extension for approved research proposals that was not initiated and actively underway completed by this time. The researcher(s) is/are responsible for notifying the committee about any changes made to the original proposal. The committee reserves the right to rescind its approval if the modifications do not satisfy any of the conditions detailed above.

Included is a copy of the Collier County School District Guidelines for Conducting Research

Sincerely,

Collier County Research and Data Committee
LIST OF REFERENCES


BIOGRAPHICAL SKETCH

Brian Douglas Castellani attended Sachem High School in Ronkonkoma, New York. He graduated from the University of South Florida in 1991, receiving a Bachelor of Science in elementary education. In the fall of 1991, Brian started teaching at Chapel Hill Middle School in Douglasville, Georgia, where he worked for three years. During this period, he earned his Master of Education in Administration and Supervision from the University of West Georgia. In the fall of 1994, Brian transferred to Chapel Hill Elementary School, where he worked for the next three years. During this period, he earned his Educational Specialist in Educational Administration from Georgia State University and started his first administrative position as instructional lead teacher. Since then, he has served as instructional lead teacher at Bright Star Elementary School, assistant principal at Chestnut Log Middle School and Corkscrew Elementary School, and principal at Sea Gate Elementary School. He is currently the principal at Lake Trafford Elementary School in Immokalee, Florida.

Brian is the oldest child of Roger Robert Castellani and Kathleen Francis Castellani. He is married to Jean-Marie Castellani and is the father of two, Kathleen Patricia and Colleen Teresa. Brian enjoys watching his older daughter cheer at high school football games, camping with his children and friends, and caring for his pet turtle and fruit trees.