

2018

A Comparison of Student Achievement in Florida Charter Schools with For-Profit and Not-For-Profit Management Models

Maurice Kaprow
University of Central Florida

 Part of the [Educational Leadership Commons](#)
Find similar works at: <https://stars.library.ucf.edu/etd>
University of Central Florida Libraries <http://library.ucf.edu>

This Doctoral Dissertation (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

STARS Citation

Kaprow, Maurice, "A Comparison of Student Achievement in Florida Charter Schools with For-Profit and Not-For-Profit Management Models" (2018). *Electronic Theses and Dissertations*. 5856.
<https://stars.library.ucf.edu/etd/5856>

A COMPARISON OF STUDENT ACHIEVEMENT IN FLORIDA CHARTER SCHOOLS
WITH NOT-FOR-PROFIT AND FOR-PROFIT MANAGEMENT MODELS

by

MAURICE S. KAPROW
B.A. Yeshiva University, 1966
B.H.L. Yeshiva University, 1966
M.A. Columbia University, 1972

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the School of Teaching, Learning and Leadership
in the College of Education and Human Performance
at the University of Central Florida
Orlando, Florida

Spring Term
2018

Major Professor: Jerry Johnson

© 2018 Maurice S. Kaprow

ABSTRACT

In this study, the researcher compared student achievement in Florida charter schools by investigating differences in those managed by for profit and not-for-profit entities in all 530 charter schools that reported results on the 2016 Florida Standards Assessments in Grades 4, 8, and 10 in English Language Arts (ELA) and mathematics. Using a two-way analysis of covariance, this investigation found statistically significant achievement differences only in 10th-grade ELA when using poverty as a moderator variable and eighth-grade mathematics using both school cohort size and poverty as moderator variables. Also, the covariates of percentage of minority students, percentage of disabled students, and percentage of English language learners accounted for some of the variance in achievement results. These findings are similar to the extant literature where prior similar studies found mixed results between traditional public schools and charter schools and between not-for-profit and for-profit charter schools.

Questions are raised by this research regarding the public funding of for-profit or proprietary charter schools if they do not routinely achieve superior results to traditional public schools. Implications for future research both building on this study and investigating other aspects of charter school performance include conducting similar studies on a recurring basis to better evaluate charter school performance, closer study on the role the covariates (minority status, disability status, and English language learner status) has on charter school student achievement, and a comparison of Florida's charter schools with Florida's traditional public schools.

To Sheila, the love of my life,
who encouraged me in all that I did and wanted me to complete this project.
Rest in peace, my love.

ACKNOWLEDGMENTS

I must first thank my wonderful committee chair, Dr. Jerry Johnson, for the many hours he spent with me offering guidance and suggestions on strengthening this research and making it useful for years to come. Dr. Kenneth Murray, my first chair and later a committee member, encouraged me to examine charter schools and piqued my interest in this project. Dr. Lee Baldwin also served on this committee and was another mentor and guide who, through four classes in research and evaluation, provided me with the skills required to complete this project. Finally, Dr. Jan McGee who graciously gave of her time to serve on this committee and whose suggestions made this research more current and beneficial.

Ms. Mary Fran Gray was instrumental in helping me transpose data from the Florida Department of Education website into Excel spreadsheets to facilitate analysis of those data. Her devotion to the task was superb; she was always there to help on a moment's notice.

Ms. Terry Sypolt, the education research librarian at the University of Central Florida library, was phenomenal in her support. She took hours to help me establish my literature search and was there for consultation whenever I approached her. Her dedication and devotion are truly appreciated.

Each of my professors and my ten cohort-mates deserves my deepest thanks for all they did to make this process as easy as possible. Cohort six has grown together, and we have formed a school family, relishing in each other's achievements. I am grateful to have them all in my life.

For most of the time that I was in the Educational Leadership program, I was serving as President of Neshama: Association of Jewish Chaplains, a 600-member

international group of professionals. Fortunately, Rabbi Dr. Rafael Goldstein, the Association's Executive Director was a true friend giving me much support and encouragement along the way, as were my fellow officers and board members.

Finally, I could not have completed this work without the support and encouragement of my devoted family. My sons, Philip and Marc; my daughters (-in-law, who are like my daughters), Sara and Ivy; and my five grandchildren, Abigail, Daniel, Hailey, Shaina, and Samantha; all, in their own way, nudged me to succeed. We often had discussions about my school and their school. They are the light of my life, give me true joy, and I relish every moment I spend with them.

Thanks to all.

TABLE OF CONTENTS

LIST OF FIGURES	ix
LIST OF TABLES	x
LIST OF ABBREVIATIONS AND ACRONYMS	xi
CHAPTER 1 INTRODUCTION	1
Introduction and History	1
Problem Statement	5
Purpose of the Study	5
Research Questions	6
Operational Definitions	6
Literature Review	7
Methodology	10
Research Design	10
Participants	10
Instrumentation and Data Collection	11
Variables	11
Measurement of Variables	12
Data Analysis	13
Delimitations	14
Limitations	14
Organization of the Study	15
Summary	15
CHAPTER 2 LITERATURE REVIEW	17
Introduction	17
The Accountability Movement	19
A Nation at Risk	19
No Child Left Behind	22
Charter School Development	27
Conceptual History	27
Rationale, Expectations, and Promises	30
Minnesota	31
Growth Nationwide	33
Charter Schools in Florida	35
History in Florida	35
Enabling Legislation	41
Current Legislation	43
Charter School Management	49
Charter School Student Achievement	53
Traditional Public School vs. Charter Schools	53
Not-for-Profit versus For-Profit	64
Summary	68

CHAPTER 3 METHODOLOGY	70
Introduction.....	70
Research Questions.....	70
Participants.....	71
Instrumentation	72
Data Collection	74
Data Analysis	76
Summary	79
CHAPTER 4 RESULTS	80
Introduction.....	80
Descriptive Statistics.....	80
ANCOVA Results for the Research Questions	85
Research Question 1	85
Research Question 2	94
Summary	99
CHAPTER 5 DISCUSSION.....	103
Introduction.....	103
Discussion of the Findings and Alignment with Extant Literature.....	103
Main Effects.....	103
Interaction Effects.....	105
Covariates	107
Implications for Practice.....	108
Recommendations for Further Research.....	110
Summary.....	111
APPENDIX IRB APPROVAL LETTER.....	112
LIST OF REFERENCES	114

LIST OF FIGURES

<i>Figure 1.</i> Grade 10 English Language Arts (ELA): Interaction effect between management model and school cohort size	92
<i>Figure 2.</i> Grade 10 English Language Arts (ELA): Interaction effect between management model and school poverty.....	94

LIST OF TABLES

Table 1	<i>Variables for Analysis</i>	78
Table 2	<i>Descriptive Statistics for Fourth-Grade English Language Arts (ELA)</i>	81
Table 3	<i>Descriptive Statistics for Eighth-Grade English Language Arts (ELA)</i>	82
Table 4	<i>Descriptive Statistics for 10th-Grade English Language Arts (ELA)</i>	82
Table 5	<i>Descriptive Statistics for Fourth-grade Mathematics</i>	83
Table 6	<i>Descriptive Statistics for Eighth-grade Mathematics</i>	84
Table 7	<i>ANCOVA: Fourth-grade English Language Arts (ELA) with School Cohort Size</i>	87
Table 8	<i>ANCOVA: Fourth-grade English Language Arts (ELA) with Poverty</i>	88
Table 9	<i>ANCOVA: Eighth-grade English Language Arts (ELA) with School Cohort Size</i>	89
Table 10	<i>ANCOVA: Eighth-grade English Language Arts (ELA) with Poverty</i>	90
Table 11	<i>ANCOVA: 10th-grade English Language Arts (ELA) with School Cohort Size</i>	91
Table 12	<i>ANCOVA: 10th-grade English Language Arts (ELA) with Poverty</i>	93
Table 13	<i>ANCOVA: Fourth-grade Mathematics with School Cohort Size</i>	96
Table 14	<i>ANCOVA: Fourth-grade Mathematics with Poverty</i>	97
Table 15	<i>ANCOVA: Eighth-grade Mathematics with School Cohort Size</i>	98
Table 16	<i>ANCOVA: Eighth-grade Mathematics with Poverty</i>	99
Table 17	<i>Summary of Statistically Significant Findings</i>	101

LIST OF ABBREVIATIONS AND ACRONYMS

AFL-CIO	American Federation of Labor-Congress of Industrial Organizations
AFT	American Federation of Teachers
ALJ	Administrative Law Judge
ANCOVA	Analysis of Covariance
ANOVA	Analysis of Variance
CMO	Charter Management Organization
CREDO	Center for Research on Education Outcomes
ELA	English Language Arts
ELL	English Language Learner
EMO	Education Management Organization
ESSA	Every Student Succeeds Act
FCAT	Florida Comprehensive Assessment Test
FDOE	Florida Department of Education
Fla. Stat.	Florida Statutes
FSA	Florida Standards Assessment
KIPP	Knowledge Is Power Program
NAEP	National Assessment of Educational Progress
NCLB	No Child Left Behind
NEA	National Education Association
NSVF	New Schools Venture Fund
OPPAGA	Office of Program Policy Analysis and Governmental Accountability
PECO	Public Education Capital Outlay
REIT	Real Estate Investment Trust

SAT-9 Stanford Achievement Test. Ninth edition
SPSS Statistics Package for Social Sciences
USDOE United States Department of Education

CHAPTER 1 INTRODUCTION

Introduction and History

School choice and charter schools have become major forces in education over the past 20 years (Kahlenberg & Potter, 2015). After publication of *A Nation at Risk* by the National Commission on Excellence in Education in 1983, a movement to improve education began to take hold, ushering in the impetus for the charter school movement (Kolderie, 2005; Lockwood, 2004). In 1988, Ray Budde wrote *Education by Charter* and sent copies to many people including Albert Shanker, who was serving as President of the American Federation of Teachers, a national teachers union affiliated with the AFL-CIO (Liu, 2015; Nathan, 1996a). Shanker saw possibility in the concept and proposed charter schools as a “new kind of public school...which would allow teachers to experiment with innovative approaches to educating students” (Kahlenberg & Potter, 2015, p. 4).

Budde saw the charter revolution taking over and replacing public school districts. In his vision, Budde envisioned charter schools run by teachers. He presented his vision as a long scenario with a new superintendent addressing the school board and stating:

The time has come for teachers, both individually and in what I call “charter teams” to accept full responsibility for the function of instruction. I would do this by having teachers receive three-to-five-year mandates (and funds) for instruction directly from the school board – with no one between the teachers and the school board – not me as superintendent, nor your principal, nor a K-12 curriculum director. (p. 38)

Shanker saw teacher unions as the major force in the new charter school concept. He envisioned union representatives serving on charter school governing boards, having teachers as members of the union, and including “a plan for faculty decision making”

(Khalenberg & Potter, 2015, p. 7). He envisioned abolishing annual principal evaluations of teachers and replacing them with teaching teams that would utilize peer accountability (Khalenberg & Potter, 2015).

By 1989, Minnesota Senator Ember Reichgott crafted charter school legislation that found its way into the Minnesota Senate's omnibus education bill, first in 1989 and again in 1990. Both times, the Minnesota House of Representatives rejected the bill. Finally, in 1991, Minnesota Representatives Ken Nelson and Becky Kelso did get a compromise version of the legislation passed in the Minnesota House. That compromise also passed the Senate and was signed into law by Minnesota's governor, Arne Carlson (Kolderie, 2005).

After Minnesota's 1991 legislation, California followed suit in 1992. In 1993, six additional states (Colorado, Georgia, Massachusetts, Michigan, New Mexico, and Wisconsin) authorized charter schools. Some states had models differing from Minnesota (Kolderie, 2005, Wong & Langevin, 2007). Between 1993 and 2014, the number of states authorizing charter schools grew. By 2015, all but seven states provided for charter schools. The states that have not allowed them are Kentucky, Montana, Nebraska, North Dakota, South Dakota, Vermont, and West Virginia (Liu, 2015).

In 1994, the U. S. Congress passed the Federal Charter School Grant program that U. S. Senators Dave Durenberger of Minnesota and Joe Lieberman of Connecticut originally proposed in 1991. The Clinton administration's strong support of the charter school initiative prompted other states to draft and implement charter school legislation (Lockwood, 2004).

Florida adopted charter schools in 1996 (Wong & Langevin, 2007). By 2003, 40 states had implemented some form of charter school legislation (Wong & Langevin, 2007). In 2015, the federal *Every Student Succeeds Act* (ESSA) made provision for grants to states to foster funding and expansion of charter schools (Every Student Succeeds Act §4301 *et.seq*, 2015). The Florida legislature specifically authorizes charter schools and stated, “Charter schools shall be part of the state’s program of public education. All charter schools in Florida are public schools” (Fla. Stat.,§ 1002.33, 2015).While they do not always have the diversity of public schools, charter schools are often thought by the public to offer a “better” educational option (Crew & Anderson, 2003; Finn, Manno, & Vanourek, 2000; Finn, Manno, & Wright, 2016; Molnar, 2007). Every charter school in Florida is operated by a not-for-profit board. That board can either operate the school themselves or engage a management company to operate the school. Some operating companies are not-for-profit entities but others are for-profit entities.

For-profit Educational Management Organizations (EMO) are entities that are established to manage some charter schools and have as one of their primary goals, generating a profit for their shareholders. In Florida, these for-profit EMOs operate under contract to the charter school’s not-for-profit governing board. In the traditional public school, the incentive is to provide the best possible education to students. In the for-profit model, generating profit for shareholders becomes a (if not *the*) primary motive (Conn, 2002). The more profit generated, the higher the return on investment.

Not-for-profit charter school management models are run either by the not-for-profit board that governs the charter school or by a not-for-profit management company.

The board itself oversees the management of the school and does not, therefore, pay an outside entity to provide management services. This redirects the funds that would go toward profit in the for-profit model to other needs of the school, generally those that directly benefit students.

Unlike traditional public schools, charter schools can, and at times do, cease operations. They close their doors for a variety of reasons including but not limited to lower than expected student achievement or fiscal mismanagement. These closures can be voluntary (at the discretion of the EMO) or mandatory (as ordered by the local school district or the state). Should a mandatory closure occur, there is nothing to prevent the EMO from establishing a new entity and beginning the process again. Though in Florida, the local school district must approve each new charter school, any denial can be appealed to the State Board of Education, and that entity often orders the local district to grant the charter.

EMOs in Florida have a financial incentive to keep opening new schools because subject to qualification, new charter schools in Florida can apply to receive a Public Education Capital Outlay (PECO) grant from the state after the first three years of its existence (Florida Statutes, 2015, §1013.62). This means that after three years, charter school operators can apply to utilize state funds above and beyond the per-pupil monies they receive from the local school district to fund the costs of the real estate they occupy. Further, charter schools are not bound by the collective bargaining agreements of the local school district and can hire at any prevailing wage. There is no provision in statute to prevent charter school operators from hiring family members or others, and though instructional staff must be certificated, the administrative staff has no such requirement

(Florida Statutes, 2015, §1002.33). Theoretically, an unscrupulous individual or corporation could decide to open a charter school, pocket much of the money in the form of salaries and expenses, and close the school when the flow of money stops or the local district or the state withdraws the charter.

Problem Statement

With constant demands on limited school funds, it is essential for the public to be certain that education dollars are used solely in the best interest of students. When for-profit entities can tap into these funds even after failed experiences have resulted in closed charter schools under their management, a public policy question could arise to question whether allowing for-profit EMOs to operate in Florida is in the best interests of Floridians. Because there has been little research conducted on Florida charter school student achievement, this research will add to the knowledge base.

Purpose of the Study

The results of this study are intended to help guide legislators and others in strengthening the charter school program to assure that public funds for education are spent on student educational needs and not on the profitability of unsuccessful for-profit EMOs.

In this study, the research compared the academic performance of charter schools in Florida based on their management model (for-profit or not-for-profit) as measured by student achievement on the 2016 administration of the Florida Standards Assessment (FSA). In an effort to mitigate the influence of extraneous factors on the results of that comparison, the research design statistically controlled for variables including school

cohort size, school poverty status, student race, student disability, and English Language Learner status.

Research Questions

1. In what ways and to what extent does performance on fourth-, eighth-, and tenth-grade state English Language Arts (reading) achievement measures vary between for-profit and not-for-profit charter schools in Florida?
2. In what ways and to what extent does performance on fourth- and eighth-grade state mathematics achievement measures vary between for-profit and not-for-profit charter schools in Florida?

Operational Definitions

Disability status. measured by the percentage of students reported disabled in each school on the Florida School Public Accountability Reports 2015-2016.

English Language Learners. measured by the percentage of students reported as English Language Learners in each school on the Florida School Public Accountability Reports 2015-2016.

For-profit charter school. a school operating under a charter from the state or a local school district that is managed by a for-profit corporation, excluding private schools as listed in the Florida Charter School Directory.

Mathematics achievement. – measured by the mathematics mean scale scores on the 2016 administration of the FSA.

Minority. measured by the percentage of white students subtracted from 100 percent as reported on the Florida School Public Accountability Reports, 2015-2016.

Not-for-profit charter school. a school operating under a charter from the state or a local school district that is managed by a not-for-profit entity including groups such as the Knowledge Is Power Program (KIPP) and excluding parochial or not-for-profit private schools, as listed in the Florida Charter School Directory.

Poverty status. measured by the percentage of free and reduced lunch eligible students in each school on the Florida School Public Accountability Reports 2015-2016.

Reading achievement. measured by the English Language Arts mean scale scores on the 2016 administration of the FSA.

School cohort size. measured by dividing the school enrollment by the number of grades in the school as reported in Florida School Public Accountability Reports 2015-2016.

Literature Review

The literature investigating student achievement in charter schools across the United States is substantial, but the literature devoted solely to Florida charter schools is scant. Most of the research conducted to date has focused on comparing student achievement in charter schools to student achievement in traditional public schools. That research has shown mixed results. There have only been a few studies (Garcia, Barber, & Molnar, 2009; Molnar, 2001; Petrerson & Chingos, 2009; Toson, 2011) comparing the student achievement of students attending not-for-profit charter schools with those attending for-profit charter schools.

The anticipation of superior student performance for charter school students as compared to traditional public school students was one of the reasons charter schools were established (Crew & Anderson, 2003). Also, advocates of charter schools

postulated that charter schools would force traditional public schools to improve because of the competition that charter schools provide (Crew & Anderson, 2003). The authors concluded that there is no advantage to charter schools over traditional public schools based on student performance, and that there is no competitive reason for traditional public schools to follow charter school practices.

Zimmer, Gill, Booker, Lavertu, and Witte (2012) examined charter schools in Chicago, Denver, Milwaukee, Philadelphia, San Diego, Ohio, and Texas. Controlling for student differences in demographics and special needs, they found no significant differences between students attending charter schools and traditional public schools (Zimmer et al., 2012). In some cases, (Chicago and Texas) they found that there were advantages to students in traditional public schools. In Denver, however, they found charter school students achieving at higher levels than students in traditional public schools (Zimmer et al., 2012). They attributed some of the differences to missing data (an external validity issue) and stated that “Researchers need to be explicit about their assumptions when examining charter schools, or any other intervention” (Zimmer et al., 2012, p. 221).

Sass (2006) found that in Florida, during the first years of a charter school’s operation, student achievement was lower than it was in traditional public schools. By the fifth year, the disparity in reading achievement between charter schools and traditional public schools was eliminated, and mathematics scores exceeded those of traditional public schools. As charter schools were more closely compared, those that targeted at-risk or special needs populations showed lower student achievement

compared to traditional public schools. Also, no difference was found between for-profit and not-for-profit charter schools (Sass, 2006).

In an Arizona study, Garcia, Barber, and Molnar (2009) found that charter schools had no consistent advantage over traditional public schools. The only exception was for students who attended either a charter school or a traditional public school (but not necessarily the same school) for three consecutive years. Those students attending not-for-profit charter schools showed a higher total mathematics score (Garcia et al., 2009). In analyzing the achievement of students attending the same school for three consecutive years, the authors found both for-profit and not-for-profit charter schools showed advantages in basic skills over traditional public schools while complex thinking skills showed some negative effects.

When analyzing reasons why charter schools closed in North Carolina from 1996-2005, Paino, Renzulli, Boylan, and Bradley (2014) found that 62.50% of closures were due to financial reasons followed by 29.17% for mismanagement. The authors emphasized that though charter schools close for financial reasons, most of those closed were also underperforming in academics when compared to other charter schools. The authors acknowledged that their findings were limited to North Carolina. Therefore, they advocated for additional research to “move toward a more complete understanding of how charter schools are keeping the promises of accountability in the school choice movement....” (Paino et al., 2014, p. 531).

The research cited shows there have been no definitive findings that support the assertion that charter schools lead to increased student achievement. There has not been much research into for-profit charter school student achievement as compared to not-for-

profit charter school student achievement. The current research study was initiated to fill a gap in this area, add to the knowledge base, and increase the understanding of charter school student achievement in Florida.

Methodology

Research Design

The researcher employed a causal comparative design to investigate the possible influence of the school management model on reading and mathematics achievement among charter school students. The causal comparative design investigates differences between groups and attempts to explain those differences by examining the independent variable, in this case, the charter school management model (Fraenkel, Wallen, & Hyun, 2015). Including the moderators of school cohort size and school poverty, and the covariates of minority status, student disability, and student English Language Learner, percentages in the study gave a clearer picture of the influence of the school management model on student achievement by filtering out other likely influences. School cohort size, school poverty factors, and minority percentages have been shown in prior research to have an effect on student achievement (Egalite & Kisida, 2016; Johnson, Godwyll, & Shope, 2016; Lee & Loeb, 2000; Murphy, 2010; White et al., 2016).

Participants

The participants in this research included every charter school in Florida that tested its students using the 2016 Florida Standards Assessment (FSA). This comprised the census of reporting charter schools in the state. Thus, in sharp contrast to most empirical research, the data set included the entire population of interest, and there was

then no need to make inferences from a sample to the larger population. Relationships that differ from zero are by definition real. Measures of statistical significance are, strictly speaking, unnecessary. Nevertheless, statistical significance is reported and treated as a marker for practical significance (Bickel, 2007).

Instrumentation and Data Collection

Data were retrieved from the publicly available Florida Department of Education website. Charter school annual reports, also available on the Florida Department of Education website, were reviewed to determine the management model (for-profit or not-for-profit) that each school employed. Each charter school was categorized by its management model. The data from the state reports were entered into a single spreadsheet to enable analysis using the Statistics Package for Social Sciences (SPSS) to analyze the data.

Variables

The study had two research questions, comparing student achievement in English Language Arts (ELA) and student achievement in mathematics according to the management model of the school. The student-weighted mean scale scores for English Language Arts and mathematics for each charter school were utilized as the dependent variables in the analysis to determine if one management model was superior to the other.

The independent variable in this study was the charter school management model (for-profit or not-for-profit). The management model of each charter school was identified as either not-for-profit or for-profit and was used to compare student achievement results.

Covariates and moderator variables were included in the study to control for their influence on student achievement and to investigate the possibility of interaction effects influencing student achievement. Each school's cohort enrollment (expressed as the total school enrollment divided by the number of grades in the school) and poverty level (expressed as the percentage of students eligible for free and reduced lunch), were the moderator variables. Each school's minority status (expressed as the percentage of minority students), disabled students status (expressed as the percentage of students with disabilities), and English Language Learners status (expressed as the percentage of English Language Learners) were factored in as covariate variables.

Measurement of Variables

Each year the Florida Department of Education publishes individual school results including mean scale scores for each test of the FSA. Those results are available on the Florida Department of Education's website for download by members of the public.

Scores for some charter schools are not reported in accordance with Florida Department of Education policy: "For all grades and subjects, no data were reported if fewer than ten students were tested. Additionally, for grade 10 ELA, Algebra 1, and Geometry no data were reported if all students passed or if all students failed" (Florida Department of Education, 2016a, p. 20).

The data for this study consisted of student achievement data from the 2016 administration of the FSA in English Language Arts at Grades 4, 8, and 10, and in mathematics at Grades 4 and 8 for all charter schools reporting for 2015-2016. Student achievement was measured by the mean scale score for each school. The management model of each charter school that operated in the state during the 2015-2016 academic

year was determined by reviewing records available from the Florida Department of Education. Reliability and validity data for the 2016 FSA from the Florida Department of Education were reviewed (Florida Department of Education, 2016b). Demographic data from the Florida Department of Education including school enrollment and number of grades, poverty, minority status, percentage of students with disabilities, and English Language Learners (ELL) were used as moderator variables and covariates (Florida Department of Education, 2016c).

Data Analysis

For each group of charter schools (i.e., not-for-profit and for-profit), the mean and the standard deviations for the dependent and independent variables were calculated and presented as descriptive statistics. The two groups were then compared using a two-way analysis of covariance (ANCOVA) using school cohort size and poverty status as moderator variables and percentage of minority students, percentage of students with disabilities, and percentage of students who were English language learners as covariates. Through the ANCOVA, the null hypotheses that there was no difference between student achievement in for-profit and not-for-profit charter schools was tested for statistical significance. Significant results were reported as a marker for practical significance, because the use of the full population meant there was no need to generalize from a sample. As noted, the use of ANCOVA as opposed to ANOVA allowed the analysis to control for the influence of relevant school characteristics and to investigate the possibility of interaction influences; its use enhances the researcher's ability to detect differences that are attributable to the management model. To determine the power of the results, a partial Eta squared was calculated as a measure of effect size to determine if the

differences, if any, were small, moderate, or large. Tabachnick & Fidell (1989) defined partial Eta squared differences as small if .01-.089; medium as .09 to .249; and large as .25 or more.

Delimitations

This study design included the following delimitations:

1. This study was conducted to investigate charter schools in Florida.
2. Student achievement was measured by the mean scale scores on the 2016 administration of the English Language Arts and mathematics FSA.

Limitations

This study design included the following limitations:

1. Because the study was delimited to charter schools in Florida, results are not immediately generalizable to other states.
2. Because scores used to measure academic performance were limited to English Language Arts and mathematics, the results are not necessarily representative of the overall academic performance of charter schools.
3. Only charter schools reporting FSA results in 2016 were included in the study. The schools not included were those that were exempt from reporting by law or regulation. Because these charter schools' results were missing, their student achievement was not included in the calculations. This may have affected the study outcome.
4. Not every charter school had identical resources. There were differences between schools in materials, student-teacher ratios, teacher experience

levels, educational philosophy, and per-pupil expenditures. These factors, although not readily available, may have affected the results of the study.

5. Differing testing conditions among the charter schools may have had an undue influence on the results. Some of the schools utilized computer testing, and in some locations technical problems arose. Other local occurrences such as noise outside of the testing environment, unexpected interruptions to the testing room or similar events may have occurred and affected test results. Such interferences in the testing process were not readily available.

Organization of the Study

The report of the research has been divided into five chapters. This first chapter is the introduction to the topic and established the importance of the study including a brief charter school history, a review of the gaps in the extant literature, and an overview of the methodology used to examine and analyze the data. The limitations and delimitations of the study were also presented.

Chapter 2 consists of an exhaustive review of the extant literature on charter schools. Chapter 3 details the methodology used in the study. Chapters 4 and 5 report and discuss the results of the research, offering suggestions for future research.

Summary

Chapter 1 set forth the premise and the justification for the study of the influence on student achievement in Florida of charter school management models (for-profit or not-for-profit). The chapter began with an introduction to the charter school movement,

its legal beginnings in Minnesota, and its spread across the United States including Florida, where enabling legislation was passed in 1996. A brief review of the differing management models was presented culminating in the study's problem statement, raising the public policy question of determining if for-profit charter schools are in the public interest. The study's research questions were presented along with the operational definitions used in this research. A brief review of the extant literature followed with the observation that there has been little research on this topic to date and that this study will help fill some of the gaps in the literature. The methodology for the study was presented, including the study's limitations and delimitations. The chapter concluded with an overview of the study's organization.

CHAPTER 2 LITERATURE REVIEW

Introduction

Charter schools have proliferated in Florida since they were authorized by statute in 1996. All Florida charter schools are governed by a not-for-profit board and may contract with an educational management company to provide management services for the school. Some of these management companies are not-for profit entities but others are for-profit corporations.

The literature search for this dissertation was conducted using multiple Ebsco databases. The search began with the researcher targeting the terms “charter schools” and “achievement.” This search yielded 1,180 results. To narrow the search, the terms were refined to charter schools, achievement, and profit. This search yielded 174 results. The search was then rerun, substituting the term, nonprofit instead of the term, profit, which yielded 139 results, some of which were duplicates from the profit search.

Because this dissertation focused on Florida charter schools, the search was run three more times. The first of these reruns used the terms, charter school, nonprofit, and Florida. This yielded five results. When the term, nonprofit, was changed to profit, the search yielded seven results. Finally, the search was rerun the third time, using the terms charter school, achievement or state standards, and Florida. This search yielded 58 returns.

The literature search showed that little, if any, research had been conducted to study the differences between those charter schools managed by not-for profit management companies and those managed by for-profit management companies, an

important consideration given the differing and potentially competing objectives of the two types of organizations.

This chapter reviews the existing literature on charter schools including their historical beginnings, their growth nationwide and in Florida, the charter school enabling legislation in Florida, and a description of charter school management models. Also included is a review of research that addresses student achievement in charter schools as compared to traditional public schools and between charter schools with different management models. The history of charter schools is explained beginning with the prime motivator of the school choice movement, the publication of *A Nation at Risk* in 1983 by the National Commission on Excellence in Education and by the accountability movement as required in the *No Child Left Behind* legislation. The early charter school concept is explored, including the rationale, expectations, and promises of the charter school movement, the first charter school legislation in Minnesota in 1992, and the subsequent growth of charter schools nationwide.

The chapter continues by examining the development of charter schools in Florida beginning with the 1996 authorizing legislation. Discussed is how the enabling legislation has changed since its first passage and morphed into the charter schools in present day Florida.

Next, the chapter focuses on charter school management models, both not-for-profit and for-profit. The literature on proprietary charter schools is reviewed, including the concerns they engender.

Finally, research on student achievement in charter schools is reviewed. How well traditional public schools compare with charter schools both nationwide and in

Florida is discussed, concluding with an examination of the research on how student achievement in Florida's not-for-profit charter schools compares with student achievement in its for-profit charter schools.

The Accountability Movement

A Nation at Risk

In 1983, the National Commission on Excellence in Education published its landmark report to the U. S. Department of Education (USDOE) entitled, *A Nation at Risk*. The commission, created by U.S. Secretary of Education Terrence Bell on August 26, 1981, was composed of 18 educators (or education-minded political figures). The commission was charged "to examine the quality of education in the United States" (National Commission, 1983, p. 1).

In their introduction to the report, the authors wrote:

If an unfriendly power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. We have even squandered the gains in student achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems which helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament. (National Commission, 1983, p. 5)

The report was concerned that, as a result of the decline of student performance in the nation's schools, as measured by a series of 13 indicators, America would cede its place as a world leader in business, industry, and other areas of venture. The authors stated the concern that the inherent promise made to all Americans, the assurance that "All, regardless of race or class or economic status, are entitled to a fair chance and to the

tools for developing their individual powers of mind and spirit to the utmost” (National Commission, 1983, p. 8) would not be fulfilled.

To rescue America from this potential devastating fate, the commission examined the educational system in four major areas: content, expectations, time, and teaching. They found issues nationwide in each area. In the content area, they found little rigor in the curriculum with few students taking courses such as intermediate algebra, calculus, and foreign languages. They found expectations lacking with minimal competency examinations predominating because “... the ‘minimum’ ... become[s] the ‘maximum,’ thus lowering educational standard for all” (National Commission, 1983, p. 20). They also found fault with those policies that require state universities to accept any high school graduate, enabling students to take weak high school courses because college entry was guaranteed. Regarding time, the commission found that the average time students spent in school was 22 hours per week, and that driver education and cooking classes counted as much toward graduation as mathematics and the sciences. Finally, with regard to teachers, they found that many teachers were unprepared to teach, and that teacher education had too many teaching methods courses as compared to subject matter courses (National Commission, 1983).

As a result of their findings, the commission made a series of recommendations to alleviate the risk and to return the country to the path of educational superiority. These recommendations addressed the four risk areas, outlining commission concerns and adding a fifth area, leadership, and fiscal support. In the content area, the commission recommended a more rigorous sequence of courses with mandatory completion including intensive study in English, mathematics, science, social studies, and computer science. In

the area of expectations, it recommended rigorous and measurable standards to be certain students had the necessary credentials for an advanced education. In discussing time, the commission recommended a longer school day and instructional year including “7-hour school days as well as a 200- to 220-day school year” (National Commission, 1983, p. 29). Regarding teaching, better salaries, a longer work-year, and more stringent requirements for teacher education programs were recommended. For leadership and fiscal support, they reiterated the states’ primary responsibility to provide for education while reserving for the federal government the “*primary responsibility* to identify the national interest in education” (p. 33) and assure leadership to be certain that resources are available to address these concerns (National Commission, 1983).

As a direct result of the accountability recommendations in *A Nation at Risk*, a movement developed to create standards-based education, including the creation of mechanisms to evaluate student achievement. These mechanisms included both sanctions and incentives for schools and school districts that were tied to student achievement (Berends, 2004).

Ravitch (2008) opined that “The recommendations of *A Nation at Risk* remain unrealized today ... because the message was taken over by the testing and accountability posse” (last para.). Regardless of whether *A Nation at Risk* stressed the need for more accountability in the schools or whether, as Ravitch (2008) stated, her message was hijacked by those advocating testing and accountability, the report ultimately brought the issue of school accountability to the fore.

No Child Left Behind

School choice options, including charter schools, became a hotly debated topic following *A Nation at Risk*. There were attempts to initiate standards-based school reform, especially by Marshall Smith, an Undersecretary of Education from 1993 through 2000 (Berends, 2004; Carnegie Foundation for the Advancement of Teaching, 2017; USDOE, n.d.). Both the *Improving America's Schools Act of 1994* and the *Goals 2000: Educate America Act* set forth mechanisms for schools to develop standards that would enable assessment of student achievement in a significant manner (Berends, 2004; Congressional Digest, 1997; USDOE, 1995). There were many concerns about these federal mandates that were expressed by educators and policymakers. Accordingly, the *Goals 2000* legislation included provisions clarifying that state participation was voluntary, and there was no requirement mandating approval of standards by the federal government for a state to receive federal funding under the act (Congressional Digest, 1997).

By 1999, the time *Goals 2000* was set for reauthorization, its voluntary student assessment provisions came under fire from many politicians who wanted to see rigorous assessment required of all students. Ultimately, *Goals 2000* was allowed to drop by the 106th Congress (Vinovskis, 2009).

Some saw *Goals 2000* as an attempt by the federal government to have greater control over educational policy (Radu, 2012; Vinovskis, 2009). Although many Democrats supported these federal mandates, the Republicans wanted those decisions left in the hands of the state and demurred during the Clinton administration. With the election of George W. Bush in 2000, that position changed (Vinovskis, 2009).

With the enactment of the *No Child Left Behind* (NCLB) legislation in 2002, the federal government required states to be accountable not only for Title I funded programs but for the major parts of the curriculum for all students, including reading and mathematics. NCLB, a controversial piece of legislation, contained “a number of measures designed to drive broad gains in student achievement and to hold states and schools more accountable for student progress” (Editorial Projects, 2011, p. 1). The law required annual testing of students in Grades 3-8 in reading and mathematics by the 2005-06 school year. By the 2013-14 school year, schools were required to have all students at the “proficient” level on tests to be determined by the individual states. There were penalties and remedial requirements for schools with Title I programs that failed to meet proficiency levels.

Beginning in 2002-03 schools were required to report to the public information relating to their students’ academic achievement. Other provisions of the act addressed teacher qualifications. Also, a new grant program entitled Reading First designed to assist states and districts in establishing research-based reading programs for students in Grades K-3 was introduced. Additionally, the act required that adequate yearly progress be defined as applying to all students in the state, not just those in Title I programs (Editorial Project, 2011; Finn, 2008; No Child Left Behind Act of 2001; USDOE, 2002).

The success of NCLB in improving student proficiency was often debated by educators. Some pointed to the improvement in scores on the National Assessment of Educational Progress (NAEP), a standardized test administered in school districts nationwide, as proof that NCLB was working. Others argued that though there were

overall improvements in test scores, the proficiency level was not improving. Vinovskis (2009), citing other sources, stated:

Overall, fewer than a third of students in those grades [grades 4 and 8] were considered proficient in math or reading, making it even more unlikely that the goal of all children being proficient, in terms of national NAEP standards, by 2013-2014 would be met (p. 197).

There were a number of empirical studies on the effects of the NCLB legislation and student achievement. In reviewing these studies, Husband and Hunt (2015) concluded that though there was much hope for student achievement gains when the legislation was passed, research findings between 2001 and 2010 indicated that the law was generally not successful in fulfilling its objectives. There were mixed results in linking the law to student gains and many researchers detailed unintended negative consequences for the legislation. Husband and Hunt stated, “Furthermore, a significant number of schools and school districts were labeled as failures during the ten-year period of time emphasized in our review” (p. 240).

Another analysis of NCLB on student achievement indicated that in 2004 there was some correlation between mathematics achievement among fourth- and eighth-grade students and high-stakes testing results. In later testing, 2005-2009, those positive results turned into negative results. When compared with the NAEP, however, those results in mathematics disappeared, and some positive correlation developed in reading. The authors concluded that “under pressure, teachers grow more efficient at training students for the test” (Nichols, Glass, & Berliner, 2012, p. 27). They also stated that much research on the impact of testing, low-stakes testing as well as high-stakes testing, indicated that testing had little, if any, effect on student achievement (Nichols et al., 2012).

The NCLB legislation also encouraged school choice to include charter schools.

Section 5201 of the Act setting forth the purposes of the section read:

It is the purpose of this subpart to increase national understanding of the charter schools model by—

(1) providing financial assistance for the planning, program design, and initial implementation of charter schools;

(2) evaluating the effects of such schools, including the effects on students, student academic achievement, staff, and parents;

(3) expanding the number of high-quality charter schools available to students across the Nation; and

(4) encouraging the States to provide support to charter schools for facilities financing in an amount more nearly commensurate to the amount the States have typically provided for traditional public schools. (No Child Left Behind Act of 2001, §5201)

Despite the fact that charter schools have generally been considered to be public schools, and although they have been exempt from many requirements imposed on traditional public schools, charter schools have remained obligated to demonstrate student achievement outcomes on the same measures used by every other public school. This requirement by NCLB was in place despite the charter schools' accountability requirements that were imposed by their charters (Stillings, 2005).

The results of the impact of the requirement on charter schools to demonstrate student achievement outcomes with the same testing instruments used by traditional public schools is clearly indicated when examining the results of charter schools with one set of goals that are impeded because the school fails to make adequate yearly progress as mandated by NCLB. A case in point was the Washington, DC Bilingual Community Academy, a now-closed charter school, whose purpose was to provide Spanish-English bilingual education in an immersion program. The school served minorities (it had only African-American and Latino students over its three-year lifespan) and closed in 2009 because of low enrollment and financial concerns (Martin, 2015). Although student

scores were extremely low on the required assessment measure (the DC Comprehensive Assessment System), they showed marked improvement on the school's internal assessment system. This indicated that students were making progress toward proficiency on the school's measure but not on the high-stakes required testing. As a result, the school was forced to redirect from its goal of bilingual excellence to an emphasis on grade-level focused education. It was also required to now focus on test preparation. Ultimately, the school's focus was changed, and many other cultural and non-academic services including community-building activities were either curtailed or eliminated. This ultimately changed the character of the school and contributed to its ultimate closure (Martin, 2015).

In a 10-state study of charter school test scores between 1999 and 2001, Loveless (2003) found that achievement of students in charter schools fell below the achievement of students in traditional public schools by one-quarter of a standard deviation when those scores were adjusted for the students' racial and socioeconomic status. Interestingly, over the same period charter schools and traditional public schools improved at a comparable rate. Also, new charters scored lower for the first two years of their operation, and after the third year of operation met the scores of older charter schools (Loveless, 2003).

Miron & Nelson (2001) looked at student achievement in charter schools and found that in some instances there was a positive impact, in some a negative impact, and in still others both positive and negative impacts. They concluded that charter schools did not appear to impact student achievement consistently.

Charter School Development

Conceptual History

The call for school reform rang loudly in the early 1990s as schools came under intense scrutiny to improve educational outcomes. Most public schools at the time, and at present, were based on the age-grade system. Age-grading was developed by William T. Harris who, from 1868-1880 served as superintendent of the St. Louis, Missouri public schools and later, from 1889 to 1906, as the United States Commissioner of Education. His system “was the graded school, organized by years and quarters of years of work, with pupils moving through on the basis of regular and frequent examinations” (Levine & Levine, 2012, p. 457).

This system of education was based on the factory models of the industrial era that, in the early 20th century, adopted the scientific management concept devised by Frederick Taylor. The idea was to systematize how public education was delivered by standardizing many aspects of the process. Part of the motivation of this approach was to accommodate the influx of students in schools as a result of compulsory education laws. One result of this system was the state strengthening its grip on education by regulating teacher certification and setting high school graduation requirements. In some circles, it came to be known as the “one best system” (Finn et al., 2000, p. 54; Finn et al., 2016; Levine & Levine, 2012).

By 1960, noted economist Milton Friedman began advocating for the end of government-operated schools. He urged the government to provide a voucher to each family, in an amount equal to the cost of providing education, which could be used at the school of their choice, provided that the state approved the school. He envisioned

competitive schools trying to attract students based on the quality of the education they would provide. Thus, he saw market forces driving school improvement and creating better schools (Finn et al., 2016, 2000).

Concurrent with the discussions on privatizing education, others began speaking about generating equality in educational resource distribution to provide better opportunities for learning for students. The 1965 *Elementary and Secondary Education Act* was marked by its desire to equalize educational opportunity for disadvantaged students (Finn et al., 2000).

James Coleman was a pioneer in discussing school inequality. In 1966, he completed writing a report for the U.S. Department of Health, Education, and Welfare, where he found that there was no relationship between the amount of money schools spent on programs or other inputs into the educational enterprise and improved student achievement (Coleman, 1966; Finn et al., 2000).

Building on Coleman, Carroll (1966) emphasized the need to accommodate the individual needs of students rather than maintaining a one-size-fits-all model of public schools. In most schools, time and activities are fixed by the institution. He advocated for enabling students to learn at their own pace (Finn et al., 2000). He concluded, “One of the bolder hypotheses implicit in the model is that the degree of learning, other things being equal, is a simple function of the amount of time during which the pupil engages actively in learning” (Carroll, 1964, p. 732).

Another call for school choice, primarily in the form of vouchers, was sounded by Jencks (1966). He identified two major issues as obstacles to student gains in the urban areas of New York City: money and the bureaucracy of the established educational

enterprise. Realizing that changes were not likely to occur, Jencks advocated giving parents the funds so they could seek the educational environment of their choice for their children. He wrote, “If, for example, the poor were simply given the money that is now spent on their children’s education in public schools, and were told they could spend this money in private institutions, private schools would begin to spring up to serve slum children” (Jencks, 1966, p. 24).

Throughout the following years, there was discussion on school improvement, but little happened until the publication of *A Nation at Risk* when voices calling for change reached a crescendo. School choice advocates clamored for changes and suggested various models for improving student achievement and closing the equality gap. These included voucher systems, magnet schools, and alternative schools (Chubb & Moe, 1990).

Many school choice proponents advocated opening all public schools to all children, regardless of attendance or zoning areas. Districts would be required to provide information to each parent on the different school offerings in the district as well as employing personnel to assist parents in making appropriate school choices for their children. Chubb and Moe (1990) offered a recommendation to fundamentally change public schools into a choice system that would eliminate the bureaucratic structure that operated and controlled public schools. Most of those who previously held authority over the schools would have their authority permanently withdrawn, and that authority would be vested in schools, parents, and students. Schools would be legally autonomous:

Free to govern themselves as they want, specify their own goals and programs and methods, design their own organizations, select their own student bodies, and make their own personnel decisions. Parents and student would be legally empowered to choose among alternative schools, aided by institutions designed to

promote active involvement, well-informed decisions, and fair treatment. (Chubb & Moe, 1990, p. 226)

Rationale, Expectations, and Promises

When charter schools were proposed, their advocates had many dreams for the influence they would exert on the educational marketplace, including traditional public schools. Among the expectations for charters was the development of specialized schools to offer curricula not available or not stressed in the traditional school, and empowering parents and educators to operate the school. Advocates thought that better achievement results might emerge as more options including innovative approaches were created for students, and traditional public schools would be encouraged to meet the higher educational accomplishments of charter schools (Crew & Anderson, 2003; Finn et al., 2000, 2016).

In reality, these promises or hoped-for accomplishments have often faded into darkness. One of the larger and best-known not-for-profit charter school alliances is known as Knowledge Is Power Program (KIPP) and currently operates 200 schools in 31 regions (KIPP Foundation, n.d.). KIPP imposed restrictions and demands on its students and staff, leading to high attrition rates among both groups of people (Payne & Knowles, 2009). Not only has there been attrition, but there have also been other concerns. “We see little evidence substantiating the early hopes that charters would, through healthy competition, spur improvements in traditional districts” (Payne & Knowles, 2009, p. 232). Often charter schools are in competition with traditional schools to the extent that communication falters. Each side, charters and traditional schools, are focused on defeating the other and, consequently, the schools do not learn from each other (Payne & Knowles, 2009).

Another early promise of charter schools was that by relieving the charter school from many of the mandated requirements of traditional public schools, teacher autonomy would be enhanced and teachers would have the freedom to teach (Nathan, 1996b). This would enable teachers to innovate and be more resourceful with their students. Some researchers have shown that in some instances teachers do not believe they have more autonomy than their traditional public school colleagues; others have indicated they have no more autonomy than their peers (Oberfield, 2016). Finn et al. (2000), however, found that teachers do feel they have more autonomy in curricular matters as well as in school leadership (Finn et al., 2000).

One major impediment to the independence of charter schools has been the attitude of teacher unions. Teacher unions offered fierce opposition to charter school legislation fearing that it would abrogate their contracts, entice lower pay for teachers, and hold teachers more accountable for student achievement (Nathan, 1996b). Teacher unions, however, have generally been unable to sway state legislatures to weaken charter schools. “Organizations such as the NEA and AFT failed to frame the charter school debate to their advantage and in many states missed the opportunity to maintain control over this aspect of education policy” (Giersch, 2014, p. 667).

Minnesota

Minnesota, which would soon become the first state to authorize charter schools, developed its program of school choice on the premise that public education should not be limited to government-operated schools but should be open to other options (Schroeder, 2004). In 1988 the Citizens League produced a report encouraging school

choice for all children. The authors, building on the prior work of Budde and Shanker, stated:

Our best prospects for better quality--and real progress toward integration--lie in a policy environment that permits first, teachers and parents to participate in the management of their schools, and second, the creation of new, high quality schools in the parts of the community most likely to serve disadvantaged populations. (Rollwagen & McClellan, 1988, p. 3)

Budde and Shanker strove to create a school operated solely by teachers responsible only to the school board, and without oversight from either building- or district-level administrators (Budde, 1988; Finn et al., 2000; Khahlenberg & Potter, 2015).

The Minnesota initiative to pass charter school legislation took four years to become law. Starting in 1989, legislation was filed to permit charter schools but did not muster sufficient votes to be enacted. In 1991, a compromise bill was passed that granted freedom to charters from state regulations and statutes, affording each charter school status as a school district unto its own with the ability to hire and manage its own funds that were to flow directly from the state to the school. The compromise, however, limited charter schools to eight in the state, provided that only school districts could grant charters, and required the governing board of each charter to have a majority membership of certificated teachers who were employees of the school (Schroeder, 2004).

The first Minnesota charter school to open was St. Paul's City Academy which began operation in the fall of 1992. By 1993, responding to public interest and existing school district opposition to the charter schools, the Minnesota Legislature authorized the State Board of Education to hear appeals and grant charters for applicants who were not approved at the local level provided at least two local school board members supported the application. Also, they raised the number of available charters from eight to 20 and

allowed conversion of existing schools to charters with the agreement of 90% of the school's teaching staff (Schroeder, 2008).

Over the ensuing years, additional changes were made to the law. In 1997, the charter school cap was removed, allowing for an unlimited number of charter schools to operate. Additional charter school sponsors were authorized to include both public and private colleges and universities, intermediate school districts, and large not-for-profit organizations and foundations. Funding was added to charters including transportation, facility funding, extra funding for students living in poverty, assistance with charter school leasing expenses, and certain other voter-approved funding initiatives. Finally, conversion schools were authorized with 60% teacher approval instead of the initial 90% requirement, and a state waiver provision for the charter school governing body's certificated teacher requirement (Schroeder, 2004). At the time of the present study, 164 charter schools operated in Minnesota serving approximately 57,000 students in Grades K-12 (Minnesota Department of Education, 2017).

Growth Nationwide

Following Minnesota's implementation of charter schools in 1991, expansion across the United States was rapid. California followed on the heels of Minnesota in 1992. During 1993, adoption of charter school legislation was passed in Colorado, Georgia, Massachusetts, Michigan, New Mexico, and Wisconsin. Arizona, Hawaii, and Kansas joined the movement in 1994, and Arkansas, Delaware, Idaho, Louisiana, New Hampshire, New Jersey, Rhode Island, Texas, and Wyoming joined in 1995. Connecticut, the District of Columbia, Florida, Illinois, North Carolina, and South Carolina became charter school states (and territories) in 1996. Nevada, Ohio, and

Pennsylvania joined in 1997, and Missouri, New York, Utah, and Virginia joined in 1998. Oklahoma and Oregon passed legislation for charter schools in 1999 with Indiana following in 2001, Iowa, and Tennessee in 2002, and Maryland in 2003. The last states to join the movement were Mississippi in 2010, Maine in 2011, Alabama in 2015, and Washington in 2016. Although Alabama, Mississippi, and Washington have charter school laws, they do not have any operating charter schools. Finally, seven states have no provision for charter schools. They are Kentucky, Montana, Nebraska, North Dakota, South Dakota, Vermont, and West Virginia (Finn et al., 2016; Liu, 2015; National Alliance for Public Charter Schools, 2016).

The National Alliance for Public Charter Schools is a Washington, DC-based organization that advocates for public charter schools. The organization has conducted research and collected data on charter schools nationwide. According to its website, between 1999 and 2014, the number of students attending charter schools grew from 349,714 to 2,686,166, and the number of charter schools grew from 1,542 to 6,633 (National Alliance, 2017). Since 2007, the number of students attending charter schools has increased, and the number of students attending traditional public schools has decreased (Finn et al., 2016). More than 50% of the nearly three million students attending charter schools are in Arizona, California, Florida, Michigan, and Texas (Finn et al., 2016).

Charter schools are not monolithic—they do not all look alike. Some schools are general in nature, much like the traditional public school. Others may specialize in a particular approach or focus. For example, there are Montessori schools that utilize that particular educational philosophy. There are STEM schools that emphasize science,

technology, and mathematics. There are charter schools that specialize in the arts; others have an international focus, and still others are single-sex or emphasize the classics. Some schools are brick and mortar, and others are virtual. Needless to say, charter schools have not followed a single model (Finn et al., 2016).

These schools have been authorized to operate differently in each state with charter school legislation. Some states have authorized only local school districts and/or the state education department (or its appointed entity) to grant charters. Others allow universities or other nonprofit entities to issue charters. In some instances, highly successful charter schools have been authorized to replicate themselves (Finn et al., 2016).

This review of the literature revealed that charter schools have been growing and expanding in the United States, and that they were born of demands for school choice in response to continued reports of a lack of sufficient academic achievement in the public schools. This review now turns its focus to charter schools in Florida.

Charter Schools in Florida

History in Florida

Florida's legislature failed to authorize charter schools to operate in the state during the 1995 legislative session despite the efforts of Deputy Education Commissioner Frank Darden who supported the concept. Many African-American legislators were opposed to charter schools, claiming they would become segregated institutions and would become public schools for the elite. The charter school legislation was bundled into an omnibus bill that included numerous other reforms. When the bill was debated, various parts of it were excised, making it unacceptable to certain legislators. That

caused the bill not to pass. Several legislators hoped that the charter school legislation would become part of the state's budget bill that still needed to be passed (Rado, 1995, May 7). Despite the failure of that attempt, there was verbiage in the budget that authorized expenditures for innovative programs. "Darden said Education Commissioner Frank Brogan now has the authority to approve a charter school with a specific focus, such as for poor, disadvantaged students" (Rado, 1995, May 12, para. 8). In the interim before legislation could be introduced for the 1996 legislative session, the Department of Education would continue engaging with school districts to lay the foundation for charter schools once authorizing legislation passed (Rado, 1995, May 12).

During the 1996 session of the Florida Legislature, legislators passed a sweeping education bill that included the authorization for the operation of charter schools. Deputy Education Commissioner Brogan speculated that although nearly 500 charters were authorized, no more than ten would begin during the 1996-1997 school year (Rado, 1996, May 5). By the end of the 1996-1997 school year, five charter schools were operating in the state (Perkins-Gough, 1997).

Charter schools soon began to spring up across the state. Although schools opened initially in Dade, Escambia, Leon, Okaloosa, Polk, and Walton counties, an additional 18 schools planned to open the following year in Brevard, Broward, Hillsborough, Orange, Pinellas, and Seminole counties (*Ledger*, 1997, March 25).

One year later during the 1998 legislative session, consideration was given to expanding the charter school legislation in a manner that would enable school districts to increase radically the number of charters they could authorize. While testifying before the Senate Education Committee, teacher's union representative Pat Tomillo told the

senators, “You’re about to slip into, in my opinion, dangerous waters” (Rado, 1998, March 18). Eventually, with amendments, the bill passed the legislature. Additionally, the legislature authorized charter schools to receive public monies for limited capital projects including school construction and the purchase of property. Senate Education Committee chairman John Grant, the legislation’s sponsor, said “I was delighted when the governor called to tell me he would let (the charter schools bill) become law...Charter schools are a good educational alternative and the ones that we have are working” (Wallsten, 1998, May 23).

Following the 1998 legislative session, charter schools continued to proliferate in Florida. The legislature also continued to amend the charter school laws. One such amendment allowed school districts to convert schools to charter schools and several, including Hillsborough County, planned to take advantage of that provision (Chion-Kennedy, 1998, November 17).

By the end of 2004, 39 states and territories had charter schools. Over 83,000 students attended 300 charter schools in Florida. Only California and Arizona had more charter schools operating in their states (Office of Program Policy Analysis and Government Accountability [OPPAGA], 2005b).

The Florida Legislature completely rewrote the education code in 2002 in a special session (Laws of Florida, 2002). The code needed to be rewritten because both the K-12 and the State University System had been completely restructured into a single entity overseen by a common State Board of Education during the 2000 legislative session (Revamping Education Governance in Florida, 2002). The rewritten code was

the product of the state Department of Education working with varied educational interests (*St. Petersburg Times*, 2002, March 31).

Although the charter school law required annual reporting to the Florida Department of Education (FDOE) by the individual charter schools, none were submitted until November 2006 (MacGillis, 2015, January 26). In 2003, state officials cautioned charter school operators that additional evaluation of charter schools was on the horizon. At the 2003 Florida Charter School Conference, Commissioner of Education Jim Horne said, “You must perform. You need to begin to evaluate your game” (Catalanello, 2003, October 17). Lack of accountability by charter schools, however, continued for some years. A *Miami Herald* investigative report in 2011 stated:

However, while charter schools have grown into a \$400-million-a-year business in South Florida, receiving about \$6,000 in taxpayer dollars for every student enrolled, they continue to operate with little public oversight. Even when charter schools have been caught violating state laws, school districts have few tools to demand compliance. (Hiassen & McGrory, 2011 September 19, para. 3)

Many of these legal violations involved financial mismanagement. Although there were recommendations to the legislature to tighten control over charter school finances, Governor Rick Scott signed legislation lowering reporting requirements for high-performing charter schools from monthly to quarterly (Hiassen & McGrory, 2011, September 19).

There were other calls made for additional oversight for charter schools. The Florida Legislature’s Office of Program Policy Analysis and Government Accountability reported that finances were a concern with Florida charter schools. The report singled out charter schools managed by education management organizations as having a “high prevalence of financial deficits” (OPPAGA, 2005a, p. 10). A follow-up report in 2008

showed progress but continued to identify needs in financial reporting. The report cited a number of instances where potential conflicts of interest arose including news reports alleging conflicts between charter school governing board members and charter school operators. The report recommended emendation of the law to make conflict of interest provisions clearer (OPPAGA, 2008).

The charter school law removed many regulations from charter schools including much oversight. As noted by Hiassen and McGrory (2011), “It has given rise to a cottage industry of professional charter school management companies that – along with the landlords and developers who own and build schools – control the lion’s share of charter schools’ money” (para. 19).

Because in Florida, only not-for-profit boards can apply to open charter schools, “for-profit charter companies set up foundations to file the application and then hire those companies to operate the schools” (MacGillis, 2015, January 26, para 19). Some developers partnered with charter school companies to build schools with public money. In some circles, these schools were known as “McCharters” (MacGillis, 2015, January 26, para 18). Some management companies own the land or buildings occupied by the charter school it manages. In addition to management fees, some of these companies collect over 25% of the school's revenue on lease payments (Hiassen & McGrory, 2011, September 19).

The latest critical event in the history of Florida’s charter schools took place in Jefferson County, a rural county in the panhandle of Florida just east of Tallahassee (Jefferson County, FL, 2017). It is a rural, low-income county with a population of approximately 14,000. Whites comprise 62% of the county’s population. The past 16

years marked a period of “white flight” from the district when public school enrollment declined from 2,066 to 770. In 2016, only 17% of the student population was White, making Jefferson County a predominately Black school district despite the larger number of Whites living in the district (Jefferson County, FL, 2017; Legg, 2017, June 5).

Jefferson County public schools had major financial difficulty in 2009 and again in 2016 (Legg, 2017, June 5; Stewart, 2016, August 10). Florida Commissioner of Education Pam Stewart declared Jefferson County schools to be in a “state of financial emergency” and called an emergency meeting of the State Board of Education to appoint a “financial emergency board” to oversee the school district’s return to “a solid financial footing” (Stewart, 2016, August 10, pp. 2-3). In 2009, following the first financial emergency, some parents removed their children from the public schools and transferred them to either private schools in Jefferson County or to Tallahassee public schools in neighboring Leon County (Legg, 2017, June 5). This further reduced the number of white students in the schools because the three private schools in Jefferson County reported a mere 7% minority enrollment (Legg, 2017, June 5).

Jefferson County had more than a financial problem; they also had a student achievement problem. Their school district grades from 2010 through 2016 respectively were D, C, D, F, F, D, and D. Those continual poor academic results ultimately caused the Florida Department of Education to have the Jefferson County School Board turn over management of its schools to Somerset, a for-profit charter school operator that is part of the Academica charter school chain (Legg, 2017, June 5). This marked the first time an entire school district in Florida became a charter school district.

Enabling Legislation

The 1996 legislation authorizing charter schools is contained in Chapter 96-186 of the Laws of Florida, corresponding to Florida Statutes §228.056 (repealed and replaced by Florida Statutes §1002.33). The purposes of charter schools as specified in the initial legislation included the improvement of learning by students; providing increased opportunities for all students, but especially for academically low-performing children; encouraging innovative and unique methods of learning; increasing school choice opportunities; creating new accountability measures for schools; requiring that learning gains be measured by creating new and updated measurement instruments; having the school as the center of improvement rather than other structures; and expanding opportunities for teachers to control the educational program at each school (Joint Legislative Management Committee, 1996).

The legislation outlined the requirements for proposing a charter school, for sponsorship of charter schools, and for limiting the number of charter schools that could operate in each county based on school population. Enrollment in charter schools was authorized for any pupil living within the boundaries of the charter school's public school district (Joint Legislative Management Committee, 1996). Enrollment could only be limited by space in which case the charter school had to assure that each applicant had "an equal chance of being admitted through a random selection process" (Joint Legislative Management Committee, 1996, p. 464). Targeted enrollment was permitted only by grade or age level, and at-risk students. Handicapped and English Language Learning students were required to be admitted on the same basis as any other students.

Charter schools were required to be not-for-profit corporations and could choose to be either public or private employers. As a public employer, charter schools could

elect to participate in the Florida Retirement System (Joint Legislative Management Committee, 1996).

The initial charter could not exceed three years but could be renewed for up to three years at each renewal period. Charter schools were required to report annually to their sponsors, both the State Board and Commissioner of Education, the Speaker of the Florida House of Representatives, and the President of the Florida Senate (Joint Legislative Management Committee, 1996).

The statute contained nonrenewal and termination provisions including a prohibition of the local school district from assuming the legal debts of a defunct charter school. The statute did not contain an appeal mechanism for adverse decisions against charter schools. Charter schools are “exempt from all statutes of the Florida School Code, except those pertaining to civil rights and student health, safety, and welfare, or as otherwise required by this section” (Joint Legislative Management Committee, 1996, p. 468).

Teachers in charter schools are required to be certified by the State Department of Education. Employees of charter schools must be fingerprinted as required by statute. Teachers may choose to form professional groups that they own, and serve under contract to the charter school, in which case they cannot be public employees. If the school district agrees, teachers from that district may take a leave of absence from the district and may maintain their seniority in the district while they are employed by the charter school (Joint Legislative Management Committee, 1996).

Charter schools have received funds from the school district in the amount the district would have to fund their students’ education. If the student would have received

additional funding because of a special need in the school district, those additional funds also transfer to the charter school. Eligible students in charter schools must be provided any federal funds the school district received to provide the students with the same services they would have received in the school district (Joint Legislative Management Committee, 1996).

Charter schools have been obligated to provide transportation for their students in accordance with state law governing transportation to traditional public schools. The charter school is authorized to contract with the school district to provide the transportation. The statute required that, “The charter school shall ensure that transportation is not a barrier to equal access for all students residing within a reasonable distance of the charter school as determined in its charter” (Joint Legislative Management Committee, 1996, p. 469).

Charter schools have been required to instruct students for the same minimum number of days as other public schools but may add to that minimum number of days. Charter school facilities must comply with the State Uniform Building Code for Public Educational Facilities Construction or with other minimum state building and fire codes (Joint Legislative Management Committee, 1996).

Current Legislation

By 2015, the enabling legislation for charter schools had been amended over 20 times. Charter school purposes were expanded to include creation of “innovative measurement tools,” stimulating traditional public school improvement by providing “rigorous competition,” providing for an expansion of the public school system’s

capacity, and helping to relieve the impact of school districts caused by construction of new residences and homes (Florida Statutes, 2015, §1002.33 (2) (c)).

School district employees involved either directly or indirectly with a charter school application have been protected from reprisal by the school district. Appeal of negative charter school decisions by local school districts is authorized to be made to the State Board of Education's Charter School Appeal Commission. Disclosure of employees of charter schools who "are related to the charter school owner, president, chairperson of the governing board of directors, superintendent, governing board member, principal, assistant principal, or any other person who has equivalent decisionmaking authority" must be made to the school district or charter school sponsor (Florida Statutes, 2015, §1002.33 (7) (c) (18)). Relative is defined as "father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, or half sister" (Florida Statutes, 2015, §1002.33 (7) (c) (18)).

Exemplary charter schools can have their charters renewed for 15 years, but are subject to review annually and the charter can be canceled before its expiration. Annual budgets are required to be adopted by the governing board. Corrective actions are required for charter schools that earn "three consecutive grades of 'D', two consecutive grades of 'D' followed by a grade of 'F', or two nonconsecutive grades of 'F' within a 3-year period" (Florida Statutes, 2015, §1002.33 (9) (n) (2) (a)).

Enrollment preferences have been authorized for siblings of a student who attends the charter school, children of charter school governing board members, children of

charter school employees, children of charter-school-in-the-workplace employees, children of a municipal resident of a charter-school-in-a-municipality, voluntary prekindergarten graduates who graduated from the charter school's voluntary prekindergarten program or the charter school's governing board voluntary prekindergarten program in the prior school year, or children of active duty members of the United States Armed Forces (Florida Statutes, 2015).

Charter schools have also been authorized to limit enrollment to target only specific populations of students. These populations include limited ages or grades; academically at-risk students including drop-out risk; charter-school-in-the-workplace or charter-school-in-a-municipality students; students living in reasonable proximity to the charter school, except that they are subject to a random lottery and to ethnic/racial balance provisions, if applicable; students with particular academic or artistic talents consistent with the school's charter; students articulating to the school based on an articulation agreement; and, students residing in a development in which the developer provided space for the charter school, subject to limitations based on the property's appraised valuation (Florida Statutes, 2015).

Charter school students have been eligible to participate in interscholastic events that are extracurricular at the public school where the student would otherwise attend. Charter school employees and contractors must have a valid background screening. Instructional personnel and school administrators who have been convicted of crimes enumerated in Florida Statutes §1012.315 have been prohibited to be employed in any position that has direct contact with students (Florida Statutes, 2015).

There have been several legal challenges to Florida's charter school law. Academies of Excellence applied to operate a charter school in Volusia County. After review of the application, the school board denied permission; and the applicant appealed to the State Board of Education who reversed the decision of the local board and authorized the applicant to operate a charter school. The school board appealed the ruling of the State Board of Education, arguing that "because the act of operating and controlling all free public schools in Volusia County is conferred exclusively on the School Board, [Florida Statute] section 1002.33(6)(c) is unconstitutional because it permits the State Board to open a charter school" (School Board of Volusia County, 2008, p. 1191). The court ruled that the statute grants review authority to the State Board of Education and if approved after that review, control of the charter school is vested in the local school board in compliance with the Florida Constitution. The court specifically noted that after approval, the local district retains the authority to operate, control, and supervise all public schools within the district (School Board of Volusia County, 2008).

In 1999, the School Board of Palm Beach County, Florida approved the Joseph Littles Nguzo Saba Charter School (hereafter, Joseph Littles) to operate (Imhotep-Nghuzo Saba Charter School, 2007). In 2005, Joseph Littles applied to the school board to open two additional charter schools, (a) the Imhotep-Nguzo Saba Charter School and (b) the Mandela-Nguzo Saba Charter School. The school board denied the applications based on a school board policy that implements a State Board of Education waiver on the number of charter schools permitted to operate in the county (Imhotep-Nghuzo Saba Charter School, 2007).

Joseph Littles appealed to the State Board of Education. The state board referred the appeal to the Florida Charter School Appeal Commission for review and a non-binding recommendation. The commission recommended approval of the charter because it felt the State Board did not have statutory cause to deny the application (Imhotep-Nghuzo Saba Charter School, 2007). At a subsequent hearing conducted by the State Board of Education, Joseph Littles argued that the school board policy upon which the original rejection was based was *ultra vires*, i.e., “a body exercising an invalid excess of power or authority” (*Black’s Law Dictionary*, 2017, para. 2) because charter schools are exempt from school board policies (Imhotep-Nghuzo Saba Charter School, 2007). The State Board of Education rejected the Appeal Commission recommendation and voted to deny the charter.

The Court found that the charter schools relied

...on Florida Statutes section 1002.33(5)(b)4., which states that the "sponsor's policies shall not apply to a charter school." This reliance is misplaced. While the subject provision was clearly aimed at giving charter schools some measure of academic and administrative freedom, we do not read this provision to prohibit the School Board from adopting and enforcing policies related to the creation, renewal or termination of the charter schools they sponsor (Imhotep-Nghuzo Saba Charter School, 2007, p. 1282).

The schools argued further that the denial of their application was without good cause as required by the enabling statute. The court found that “...the ‘Guiding Principles; Purpose’ section of the charter school statute provides sufficient legislative guidance to support the School Board’s Policy” (Imhotep-Nghuzo Saba Charter School, 2007, p. 1284).

The court affirmed the decision of the State Board of Education in denying the application. They determined that the State Board’s finding regarding the local board’s

decision was based on “competent and substantial evidence” and that the State Board’s decision must be treated with a “great deal of deference” (Imhotep-Nghuzo Saba Charter School, 2007,p. 128).

In another example, the Tampa School Development Corporation operated two charter schools in Hillsborough County. Trinity School was an elementary school, and the Upper School was a middle school. The elementary school was chartered in 1999 as a K-8 school. In 2004, the school board allowed Trinity to split its charter into two schools to take advantage of federal funding for new charter schools. The Upper School was given a separate charter. Both schools were determined to be “A” rated schools (School Board of Hillsborough County, 2013).

In 2008 after experiencing some fiscal difficulties in operating two schools, Trinity applied to the school board to consolidate the two charters back into one. Trinity calculated savings of approximately \$120,000 every year with the consolidation. In May 2010 when the charter was up for renewal the school board sent Trinity only one charter renewal contract that covered both schools (School Board of Hillsborough County, 2013).

In June 2010, the school board learned it stood to lose \$60,000 if they authorized the consolidation of the two schools and rejected the consolidation offer Trinity made. After unsuccessful mediation, the matter went to a hearing with an Administrative Law Judge (ALJ) who granted Trinity’s consolidation request (School Board of Hillsborough County, 2013).

The school board appealed the ALJ’s order, alleging that the ALJ “lacked subject matter jurisdiction and erred in reversing the School Board's denial” (School Board of

Hillsborough County, 2013, p. 920). They also claimed the charter school law, Florida Statutes §1002.33, was unconstitutional because it “impinges on the School Board's authority to run the public school system in Hillsborough County” (School Board of Hillsborough County, 2013, p. 920).

The court first addressed the jurisdictional issue and found that the consolidation was not a new charter application but instead was a modification to an existing charter contract. The court adopted the ALJ's reason and language, stating: “Because of [*sic*] the issue brought forward by Trinity School occurs in the context of an existing charter and is a dispute concerning the charter school statute, subject matter jurisdiction is proper under section 1002.33(6)(h) (School Board of Hillsborough County, 2013, p. 922).

Citing its holding in the case of School Board of Volusia County vs. Academies of Excellence, Inc. the court dismissed the school board's constitutional argument and affirmed the decision of the ALJ (School Board of Hillsborough County, 2013).

Charter School Management

By statute, “Every charter school in Florida must be organized as or operated by, a nonprofit organization” (Florida Statutes, 2015, §1002.33 (12) (i)). That means the governing board of the charter school must be formed as a not-for-profit corporation, but that does not preclude the school from contracting or associating with a not-for profit or for-profit management company (Florida Statutes, 2015).

Some charter schools have chosen to manage themselves without the assistance of an outside group. Others have employed a management company. For those that choose management companies, there are two models they can select. One is a for-profit model known as an education management organization (EMO). The other is a not-for-profit

model known as a charter management organization (CMO). Both EMOs and CMOs are designed to operate a number of charter schools in a centralized manner to achieve economy of scale, similar to that of a school district. (Farrell, Wohlstetter, & Smith, 2012; Quinn, Oelberger, & Meyerson, 2016; Roch & Sai, 2015). Nationally, as of the 2014-15 school year there were 1,882 charter schools managed by CMOs, 1,059 managed by EMOs, and 3,662 operating independently (National Alliance for Public Charter Schools, 2017).

Both management models are similar. They seek to operate the school: EMOs, with the stated purpose of making money for their shareholders (Conn, 2002); and CMOs, without the profit motive. Baker and Miron (2015) used the term “EMO” interchangeably for both for-profit and not-for-profit management organizations. They noted that “Most nonprofit EMOs look, act, and have management agreements similar to for-profit EMOs” (Baker & Miron, 2015, p. 7). Many CMOs have been supported by the New Schools Venture Fund (NSVF), the Bill and Melinda Gates Foundation, and other similar entities that have provided over one-half billion dollars to CMOs as of 2009 (Baker & Miron, 2015; Farrell et al., 2012; Quinn et al., 2016). Generally, the CMO has had a central office staff that supports or operates a number of schools.

Some of the functions that CMOs perform for charter schools include assistance with financial, personnel, and facility management, including facility procurement. By bringing several or more charter schools under one management plan, bulk purchasing of equipment and supplies, as well as utilization of specialized teaching staff, can lead to economic savings. With the ability of a CMO to help plan for all of the schools under its

aegis, innovations can be shared more easily as can the replication of successful charter school programs (Farrell et al., 2012).

The first CMO was developed by Don Shavley and Reed Hastings who formed Aspire Public Schools in 1998. Shavley, who was operating a charter school, was a former superintendent of schools. Hastings was a technology-minded businessman and philanthropist (Farrell et al., 2012; Quinn et al., 2016; Wilson, Levin, & Mathews, 2005). The Aspire model required conformity to “curriculum, instruction, and operation across all schools, with limited room for local adjustment” (Quinn et al., 2016, p. 20). The idea was to strictly regulate both the instructional and business sides of charter school operation. This concept marked a change in charter school founding philosophy of establishing schools that were able to operate independently in an effort to innovate and not be tied to a centralized system of control (Quinn, 2016).

Also in 1998, Kim Smith, a social entrepreneur, along with venture capitalists John Doerr and Brook Byers, started what came to be known as the New Schools Venture Fund (NSVF). These businessmen “believed that education entrepreneurs could ... bring about much-needed change in public education if they had access to both early-stage capital and strategic, hands-on support to start and grow their organizations” (New Schools Venture Fund, 2017, para. 1).

One issue that arose for charter schools in the early years was school funding. To obtain agreement from the states and pass legislation to authorize charter schools, some agreed to accept lower per-pupil payments from the public treasury. This compromise postulated that charter schools could provide a better education for less money so long as

they were freed from many of the public school's regulations. This was, in many respects, naïve (Finn et al., 2016).

School facilities were also a cost factor to charter schools. Charter schools were often left on their own to secure adequate facilities with little, if any, assistance from the public school district or the state. Philanthropy and private capital infusions alleviated some of those concerns but brought charges of profiteering and privatization (Finn et al., 2016).

For-profit management of charter schools has brought with it other concerns. While providing many of the same management tools as CMOs, EMOs also have the intention of creating profit for their investors (Conn, 2002). This is nowhere more evident than in real estate dealings.

Though CMOs at times engage in real estate transactions to provide charter school facilities, this is most often seen with EMOs (Baker & Miron, 2015; Fabricant & Fine, 2012). One of the most common methods of EMOs profiting from charter school real estate is through Real Estate Investment Trusts (REITs). As an example, the EMO opens another corporation, a real estate corporation, as a wholly-owned subsidiary. The real estate corporation purchases property, upgrades it, and sells it to a REIT at a profit. The REIT then subleases the property back to the EMO's real estate corporation which then leases it back to the charter school. Often the rentals amount to thousands of dollars per pupil, a large portion of the charter school's income (Baker & Miron, 2015; Fabricant & Fine, 2012; Finn et al., 2016; Kelley, 2015).

Another method EMOs use to generate profits is known as a "sweeps" contract (Kelley, 2015, p. 1802). In this contract, the EMO receives virtually all of the income the

charter school receives from all sources immediately upon receipt. The EMO then totally operates the charter school with everything it needs including instructional and administrative staff, facilities, furnishings, books, materials, financial services, equipment, everything needed to operate a school. At the end of the year, whatever money is left becomes profit for the EMO (Kelley, 2015).

Building on this understanding of where charter schools originated, their purpose, their legislative basis, and their management models, the researcher next considered the results these entities have achieved, as reported in the research. Charter schools are compared with traditional public schools nationwide and then in Florida. This is followed by an examination of student achievement at charter schools managed by not-for-profit management entities compared to those who utilize for-profit management companies.

Charter School Student Achievement

Traditional Public School vs. Charter Schools

Nationwide

Since the inception of charter schools in 1992, researchers have been looking at the student achievement results these schools produce. The results have been mixed, and there are many conflicting data. “It is important to recognize that despite discrepancies across studies, there is a general consensus among researchers that charter schools are not a panacea. Evidence of charter school performance outstripping traditional public schools is limited” (Silverman, 2012, p. 264). Finn et al. (2016) reported:

Broadly speaking, charters show positive effects for poor children (especially black and Hispanic students), often for English language learners, and sometimes for special education students. For white and Asian students, however, the effects

are generally negative or neutral...In urban areas, where students are overwhelmingly low-achieving, poor and non-white, charter schools tend to do better than other public schools in improving student achievement. By contrast, outside of urban areas, where students tend to be white and middle class, charters do no better and sometimes worse than public schools. (p. 50)

The most recent comprehensive study of student achievement in charter schools was conducted by the Stanford University's Center for Research on Education Outcomes (CREDO). The researchers examined charter schools in 27 states enrolling 95% of all charter school students in the country. The data included observations of 1,532,506 students and a matching group of students in traditional public schools. "Matching is done on the basis of a Virtual Control Record protocol, which creates a 'virtual twin' for each charter student who is represented in the data" (Center for Research, 2013, p. 9).

Different student groups in charter schools were determined to have had differing outcomes on student achievement when compared to students in traditional public schools. White students had negative growth in reading and mathematics. Overall, Black students had positive growth in both reading and mathematics; however, there were differences between Black students in poverty and Black students not in poverty. Black students in poverty showed positive growth in both reading and mathematics, but those students not in poverty scored similarly to students in traditional public schools. Hispanic students in charter schools overall scored similarly to Hispanic students in traditional public schools in both reading and mathematics. Hispanic students in poverty scored positively compared to Hispanic students not in poverty, but those not in poverty scored negatively compared to students in traditional public schools. Hispanic ELL students scored positively in both reading and mathematics, but Hispanic non-ELL students scored positively in reading and similarly in mathematics. Asian students scored

similarly in reading and negatively in mathematics; special education students scored similarly in reading and positively in mathematics (Center for Research, 2013).

In a review of charter school academic results, Miron and Nelson (2001) examined the results of independent charter school accountability (including academic achievement) reports from seven states: California, Louisiana, Massachusetts, Minnesota, New Jersey, North Carolina, and Wisconsin. The authors lamented that despite charter schools having a 10-year history, there were few studies that examined charter school student achievement with a quality measure. Ultimately, they found that “the existing body of research reveals a mixed picture, with studies from some states suggesting a positive impact, studies from other states suggesting negative impact, and some providing evidence of positive and negative impacts” (Miron & Nelson, 2001, abstract).

A North Carolina study was conducted to examine student achievement in charter schools based on the North Carolina Education Research Data Center data. Bifulco and Ladd (2004) analyzed individual test scores on end-of-grade tests with data coming from the North Carolina Department of Public Instruction. The data covered all third-grade students in the years 1996, 1997, 1998, 1999, and 2000. Using identifiers, the investigators were able to follow the students through the eighth-grade or the year they left North Carolina schools. Data “cohorts range[d] in size from 93,349 in 1996 to 106,106 in 2000” (Bifulco & Ladd, 2004, p. 13).

The results of this study indicated that charter school students in North Carolina performed below where they would have performed had they been in traditional public schools. Bifulco and Ladd (2004) also found large negative effects because of charter

school attendance. They also determined that traditional public schools did not adopt any new practices gleaned from their charter school colleagues.

One study of Michigan charter schools focused on fourth-grade reading and mathematics scores on the Michigan Educational Assessment Program tests, as the majority of Michigan charter schools were elementary schools. In this study, charter school students had lower scores on fourth-grade reading and mathematics as compared to their traditional public school counterparts. One explanation for these results was that the Michigan charter schools tended to attract lower-performing students. These lower-performing students had left traditional public schools for charter schools. Bettinger (2005) wrote, “There is no robust, significant evidence that test scores increase or decrease in neighboring public schools as the number of charters increases” (p. 145). He concluded that charter school students did not have an appreciable academic gain, and may perform lower when compared to traditional public school students.

In reviewing several studies, Heaggans (2006) found that charter schools had not demonstrated student achievement that would close the gap and that charter schools may not solve problems of inequality among students. He determined that charter schools cause all students to suffer because they cause “irreparable financial harm to school districts” (p. 431).

In a study examining the perceptions of parents whose children attend charter schools in Ohio, May (2006) found that even without statistically significant evidence (a) student achievement in charter schools surpassed that of students in traditional public schools and (b) parents overwhelmingly preferred the charter school experience to that of the traditional public school. Many parents chose charter schools because “they sought to

improve the quality of their child's education and the academics and/or curriculum” (May, 2006, p. 32). This study was conducted as a cross-sectional telephone survey of 250 parents who withdrew their children from the traditional public school in an urban school district in Midwestern Ohio and enrolled them in independent charter schools (May, 2006).

To systematically analyze the research on student achievement and charter schools as of 2011, the Albert Shanker Institute published a policy brief (DiCarlo, 2011). One focus of the policy brief was to address the question of whether charter schools produce larger gains in testing students than traditional public schools. This examination, as in many other studies, revealed that academic performance of most charter schools compared to traditional public schools shows little difference between them. DiCarlo also found that in urban areas, and when working with lower-performing students, charter schools tended to get somewhat better results than traditional public schools.

In a seven-state study comparing charter schools to traditional public schools, Zimmer et al. used longitudinal student data gathered as the students moved between traditional public schools and charter schools. Because they were analyzing data across various locations, they standardized the scores to z -scores using a mean of zero and a standard deviation of one. They found that more often than not, charter schools and traditional public schools had little appreciable difference in student achievement. Only in Denver and Milwaukee did charter schools outperform their traditional public school peers with positive, statistically significant differences in mathematics; in Ohio and Texas, however, they found negative statistically significant results in mathematics. When the researchers examined reading scores, they found no results that were positive

with statistical significance; in Ohio, Texas, and Chicago, however, they found statistically significant results that were negative. This led them to conclude, “We find that students perform similarly across the two settings [charter schools and traditional public schools] in most locations” (Zimmer et al., 2012, p. 221).

In a New York State study of charter school performance, Silverman (2012) studied 16 school districts that had both traditional public schools and charter schools. These districts included Albany, the Buffalo-Niagara Falls metropolitan area, Ithaca, the New York metropolitan area, Rochester, Syracuse, and Troy. Student characteristics, as well as student achievement, were measured. The investigators found that in charter schools there was higher student turnover than in traditional public schools. They found that students who were eligible for free lunch were less likely to enroll in charter schools as compared to students eligible for reduced-price lunch who were more likely to enroll in charter schools. Also, “Whites ($p < .01$), Hispanics ($p < .001$), and Asians ($p < .001$)...were less likely to enroll in charter schools. However, Black and multiracial students were significantly ($p < .001$) more likely to enroll in charter schools” (Silverman, 2012, p. 273).

In addressing student achievement, Silverman (2012) found that sixth- and eighth-grade mathematics scores were higher for charter schools but that there were no significant differences in English scores between charter schools and traditional public schools. Also, Silverman found that there were no significant effects associated with charter schools and students passing either the English or mathematics New York State Regents examinations.

Using two cohorts of charter schools during the years 2005-2006 and 2006-2007, Clark, Gleason, Tuttle, and Silverberg (2015) compared student performance of students who were and were not selected by random lottery to attend a charter school. The study schools were comprised of 33 charter middle schools in 13 states. They found that charter schools, on average, showed negative impacts on student achievement that were non-significant. Also, more disadvantaged students showed positive or insignificant gains while more advantaged students showed negative and insignificant gains in student achievement. The investigators also found more positive results for students in urban areas than students in non-urban areas or in schools serving more advantaged students (Clark et al., 2015).

A meta-analysis of the literature on student achievement in charter schools by Betts and Tang completed in 2011 also yielded mixed results. The authors wrote, “Focusing on math and reading scores, the authors find compelling evidence that charters under-perform traditional public schools in some locations, grades, and subjects, and out-perform traditional public schools in other locations, grades, and subjects” (p. 1). They noted that for elementary school reading and for mathematics and reading in the middle schools, the evidence did not show any negative effects, and in some instances, showed positive effects. The effect sizes they reported were 0.02 for elementary reading, 0.05 for elementary mathematics, and 0.055 for middle school mathematics (Betts & Tang, 2011). KIPP charter schools along with charter schools in both New York City and Boston showed somewhat larger and more positive effect sizes than charter schools in other locations (Betts & Tang, 2011). López (2014), in a critique of Betts and Tang, found that their “conclusion is overstated; the actual results are not positive in reading and are not

significant in high school math; for elementary and middle school math, effect sizes are very small, ranging from 0.03 to 0.08 s.d.” (López, 2014, summary of review). López concluded that there was no difference between test-score outcomes of charter schools and traditional public schools.

Florida

Studies on student achievement in Florida charter schools were few in number at the time of the present study. One of the first studies was based on a program theory evaluation of charter schools by Crew and Anderson (2003). These researchers posited that charter school students would have greater achievement than traditional public school students. The theory’s rationale was that because of the success of charter schools, traditional public schools would incorporate ideas learned from the charter schools and this would lead to enhanced performance among traditional public schools (Crew & Anderson, 2003).

The investigators used a mixed-methods approach to examine performance during the 1999-2000 school year. They amassed data from FCAT results in reading and mathematics, annual school progress and financial reports, and a questionnaire that was sent to charter school principals and to school district officials charged with overseeing charter school matters.

Results from their study revealed that charter schools have mixed performance results, some performing above average and others below average. The researchers concluded that more charter schools than traditional public schools had a low level of academic performance. They stated specifically that non-charter school students were

not outperformed by charter school students. Additionally, they found that traditional public schools did not change in response to charter schools (Crew & Anderson, 2003).

Florida's charter school legislation has required that a review of charter schools be made annually to the legislature and other government officials (Florida Statutes, 2015, §1002.33 (23)). In an OPPAGA (2005b) report to the Legislature, charter school students were said to be less proficient in reading and mathematics than their traditional public school peers. One possible reason offered for that discrepancy was that students attending charter schools often were achieving below grade level when they arrived at the charter school. It was also observed in the report that though charter school students gained less than their peers in elementary and middle school, in charter high schools, student gains were higher than those of their traditional public school peers. The investigators faulted many charter schools, citing that in one-third of these schools both academic progress and learning gains were poor compared to other charter schools (OPPAGA, 2005b).

OPPAGA (2005b) offered a series of recommendations to the Florida Department of Education that included developing a template for charter school authorization and assisting school districts with guidelines to develop strong educational objectives for their schools. Further recommendations included providing training for applicants for charter schools and for local schools boards who oversee them to establish appropriate and measurable learning outcomes; and developing training and assistance for charter schools to aid them in using practices that enhance and promote high student achievement (OPPAGA, 2005b).

Also, OPPAGA (2005b) recommended that the legislature amend the charter school law to require authorizers to include performance expectations in new school charters and to require school districts to verify that, in fact, those performance expectations have been met (OPPAGA, 2005b).

Hassel, Terrell, & Kowal (2006) also examined Florida charter school performance. They too, found that based on the results of the Florida Comprehensive Assessment Test in reading and mathematics, charter school students did less well than students in traditional public schools. Their results for charter school students who met state expectations in mathematics were between 1% and 9% lower than in traditional public schools. For charter school students who met state expectations in reading, results were between 1% and 6% lower than students in traditional public schools (Hassel et al., 2006).

The investigators also had some positive things to say about charter schools. They found that under the NCLB requirements, charter schools tended to outperform traditional public schools. They explained this disparity by recognizing that the smaller charter school classes with few subgroups of students made it easier to meet the NCLB targets. Furthermore, Black students were found to have fared better in charter schools than they had in traditional public schools. Though Black charter school students scored lower than Black students in traditional public schools, their reading proficiency grew at a faster pace than that of their traditional public school peers (Hassel et al., 2006).

In this same study, Hassel et al. (2006) found, similar to Sass (2006), traditional public schools located near charter schools and who sensed competition from the

charters, had greater mathematics score gains than did those traditional public schools that did not feel similar competition.

The last reviewed study that focused exclusively on Florida charter schools was published in 2006 by Dr. Tim Sass, an economist at Florida State University. Utilizing publically available data from the Florida Department of Education, the researcher used the results of a norm-referenced version of the FCAT, a test that was administered to all students in Grades 3-10 over the course of the study (1999-2000 through 2002-2003). That test was selected because it was a version of the SAT-9 and scores were scaled “so that a one-point increase in the score at one place on the scale represents the same difference in performance as a one-point increase anywhere else on the scale” (Sass, 2006, p. 101). The sample was limited to Grade 3-10 students who took the test consecutively three times between the years 1999-2000 and 2002-2003 (Sass, 2006).

Analysis of the data revealed that charter schools scored lower in both reading and mathematics by 0.5 and 1.2 scale-score points respectively when compared to traditional public schools. Further analysis, however, revealed that over time, charter school performance increased over the first four years of their existence. By the fifth year of a charter school’s operation, charter students surpassed traditional public school achievement (Sass, 2006). In examining the influence of charter schools on traditional public schools, the results indicated that the presence of a charter school in proximity to a traditional public school did correlate “with modest improvement in math achievement and no reduction in reading achievement in traditional public schools” (Sass, 2006, p. 118). Finally, Sass (2006) concluded that those charter schools that targeted students with disabilities or students deemed to be at-risk had lower achievement than charter

schools that did not target those students or traditional public schools. Also, charter school management structure did not show any impact on student achievement.

Not-for-Profit versus For-Profit

One charter school innovation that has transferred to some traditional public school districts is the use of an EMO. In a 2001 review of for-profit EMOs and their operations in public education, Molnar (2001) found that the available evidence indicated that these entities cannot fulfill the responsibility of providing an appropriate education to produce responsible students and educated citizens. Molnar contended that if EMOs could provide such an education, it would cost more than was being currently spent on public education. One reason for the increased cost would be the obligation of the for-profit corporation to provide its shareholders with a return on their investments. Another reason for increased costs would be the oversight costs to ensure appropriate expenditures in the public interest without the diversion of funds for illicit private pecuniary gain (Molnar, 2001).

Providing better educational results than traditional public schools has been one of the primary promises of charter schools, and many EMOs claimed success in providing better student achievement. Unfortunately, these claims have not always borne out upon examination (Molnar, 2001). Citing a 2001 study by Horn and Miron examining charter schools in Michigan, Molnar (2001) stated:

Overall, charter schools showed no net increase in their students pass rates—the percentage of students in a school who passed these tests—from the 1995-'96 school year to the 1999-2000 school year, while public school districts where those charters were based saw their pass rates rise from 49.4% in 1995-'96 to 68% in 1999-2000 (p. 4).

Molnar (2001), citing Miron and Applegate's 2000 study of Edison Schools, a for-profit management corporation, wrote that although Edison claimed its students exceeded grade-level on norm-referenced testing, they were, in fact, on grade-level but did not exceed it. When reviewing criterion-referenced tests, Edison students routinely scored below students in traditional public schools but their scores exceeded those of the traditional public schools 10% of the time. Other examples of exaggeration by EMOs relative to student achievement were also noted (Molnar, 2001). Molnar concluded his study by asserting that for-profit management companies managing public schools were not likely to accomplish the goal of improving public education. "The for-profits do, however, seem quite capable of harming existing public schools" (Molnar, 2001, p. 12).

Not every evaluation of school management organizations has been negative. The Program on Education Policy and Governance of Harvard's Kennedy School of Government examined the outcome of Philadelphia's experience with both for-profit and not-for-profit management entities from 2002 through 2008. The State of Pennsylvania asked the Philadelphia school district to turn over its lowest-performing elementary and middle schools to EMOs. For-profit EMOs received contracts to operate 30 schools, and not-for-profit EMOs received contracts to operate 16 schools. The three for-profit companies were divided as follows: 20 schools were contracted to Edison Schools, five to Victory Schools, and five to Chancellor Beacon Academies. Of the schools managed by not-for-profit companies, five were contracted to foundations, five to Temple University, three to Universal Companies, and three to the University of Pennsylvania (Peterson & Chingos, 2009).

The school district provided the evaluators with student test scores in both reading and mathematics from 2001 through 2008. The years 2001 and 2002 were data from before the intervention and served as prior student performance. The years 2003 through 2008 were the years of the management intervention. The test data used were from the Terra Nova, the SAT-9, and the Pennsylvania State System of Assessment, the instrument used by the state to determine compliance with the requirement of NCLB (Peterson & Chingos, 2009). The evaluators found that the students in schools managed by for-profit EMOs gained 20% of a standard deviation in reading corresponding to approximately 36% of one year's learning. This result was not statistically significant. In mathematics, the students in the for-profit managed schools gained 25% of a standard deviation corresponding to approximately 60% of a year's learning. This figure was statistically significant (Peterson & Chingos, 2009).

For the students in the not-for-profit managed schools, the reading scores showed students decreased 9% of a standard deviation, corresponding to approximately 32% of a year's learning. This figure was only statistically significant in the first year. In mathematics, the students decreased 21% of a standard deviation corresponding to approximately 50% of a year's learning. This figure, also, was only statistically significant in the first year (Peterson & Chingos, 2009). In discussing these results, the evaluators cautioned against generalizing from these findings, because the for-profit EMOs had more experience in managing schools than the not-for-profit EMOs who "seem to have been selected as much for their strong political base as for any history of effectiveness at delivering educational services" (Peterson & Chingos, 2009, pp. 27-28).

Garcia et al. (2009) studied Arizona charter schools to determine if there was a difference between for-profit, not-for-profit, and traditional public schools in reading and mathematics student achievement. They reviewed scale-score results from the state-required administration of the SAT-9 from Grades 2-8 over the years 2001-2003. The reading portion of the SAT-9 examined reading vocabulary and reading comprehension, and the mathematics portion of the SAT-9 examined mathematics procedures and mathematics problem-solving. Both the reading vocabulary and mathematics procedures measure basic skills. Reading comprehension and mathematics problem-solving measure complex thinking skills (Garcia et al., 2009).

Garcia et al. (2009) found that neither for-profit nor not-for-profit charter schools exhibited a difference in total score student achievement over traditional public schools with one exception. The exception was for the not-for-profit charter schools which showed higher student achievement in total mathematics over traditional public schools. Citing Sass (2006), Garcia and colleagues concurred that there was no difference between the for-profit or not-for-profit status alone. In further analysis, students who attended a for-profit charter school for three consecutive years showed a small, statistically positive effect in basic reading skills as measured by the reading vocabulary test with a corresponding small, negative effect in complex thinking skills as measured by the reading comprehension test (Garcia et al., 2009).

Garcia et al. (2009) explained some of this difference by looking at the motivations and control levels of the for-profit EMOs. Because profit-making is a goal of for-profits, they seek to lower costs wherever possible. Because education is labor-intensive, some seek ways to reduce costs by looking for a way to limit the need for

professional labor. This may take the form of standardized curricula and increased emphasis on basic skills. Some for-profit EMOs that exercise a high level of control on the schools they manage have often used highly-structured curricula and assessments that favor basic skills over critical thinking skills (Garcia et al., 2009).

Toson (2011) posited that many for-profit EMOs operate in urban areas where educational quality and student achievement are problematic, and the student population is often composed of poor, Black and minority children. She stated, “Schools are still failing children and families. EMOs offer an effective option for change” (p. 660).

Toson (2011) stressed that EMOs can, without much bureaucratic control and with their financial resources, open up quality charter schools in urban areas.

Having conducted no independent research, Toson (2011) relied on the work of others, including Garcia, et al. (2009), writing, “Given that research has shown EMOs to do what they set out to do, chances are that they too will deliver on improving complex thinking skills for their students when they set out to do that” (Toson, 2011, p. 664). Clearly an advocate for EMOs, she concluded that they need to be given the opportunity to expand (Toson, 2011).

Summary

This chapter began with a review of the accountability movement starting with the publication of *A Nation at Risk* and the enactment of NCLB. As a result of those influences, charter school legislation was enacted in Minnesota. Charters rapidly spread across the nation and were authorized in Florida in 1996. Next, Florida legislation, including several challenges to the validity of the law, was reviewed. The two charter

school management models were presented including for-profit EMOs and not-for-profit CMOs as well as independent charter schools.

Existing research on student achievement in charter schools was also discussed. The research generally provides a mixed picture of charter school success. There are instances where charters have been successful and others where they were not. The majority of the research appears to indicate that charter schools often have the most successful results in urban areas where they tend to serve underprivileged, poor, and academically-challenged students.

The chapter concluded with an examination of the literature on charter school management models. That research is also mixed, and no determination has been made as to whether one management model outperforms the other. That gap in the literature was the focus of this research.

CHAPTER 3 METHODOLOGY

Introduction

This chapter describes the methods used to answer the two research questions posed in Chapter 1, to determine if there is any difference in student achievement (for English Language Arts (reading) in Grades 4, 8, and 10 and for mathematics in Grades 4 and 8) between (a) charter schools with a for-profit management model and (b) charter schools with a not-for-profit management model. The investigation, a static, non-experimental design used existing data from the 2016 administration of the FSA in Grades 4, 8, and 10 ELA and Grades 4 and 8 mathematics. Mean scale scores on the tests were the outcome used to determine if there were statistically significant differences in achievement between charter schools with not-for-profit and for-profit management models. Included in the discussion in this chapter is the rationale for using a two-way analysis of covariance (ANCOVA) with moderator variables and covariates. The chapter contains five sections: (a) research questions, (b) participants, (c) instrumentation, (d) data collection, and (e) data analysis.

Research Questions

The two research questions this study sought to answer were:

1. In what ways and to what extent does performance on fourth-, eighth-, and tenth-grade state English Language Arts (reading) achievement measures vary between for-profit and not-for-profit charter schools in Florida?

2. In what ways and to what extent does performance on fourth-and eighth-grade state mathematics achievement measures vary between for-profit and not-for-profit charter schools in Florida?

Each of these questions was investigated and answered using data that were publically available on the Florida Department of Education (FDOE) website (FDOE, 2016c, 2017a).

Participants

The participants in this study were every charter school in Florida that reported FSA test results on the Spring 2016 administration of the test. The participants numbered 530 reporting charter schools. 121 charter schools did not report data either because they tested fewer than 10 students in the reporting grades or for other reasons permitted by statute (FDOE, 2016a).

The entire population of Florida charter schools participated in the study. Accordingly, any differences in results from zero were, by definition, “real” differences, and results were not interpreted to make inferences about a larger population. Regardless, inferential procedures were utilized in an attempt to understand how the contextual variables of school cohort size, poverty, minority status, disability status, and ELL students affected the differences in achievement levels across the two categories of charter schools. Statistical significance values were interpreted as markers for practical significance (Bickel, 2007). Prior research showed that school cohort size, poverty, minority status, disabilities, and ELL did have an effect on student achievement (Egalite & Kisida, 2016; Johnson et al., 2016; Lee & Loeb, 2000; Murphy, 2010; White et al., 2016).

Instrumentation

The data used in this study were the results of the 2016 FSA. The FSA replaced the FCAT 2.0 in the 2014-2015 school year (FDOE, 2016a). The tests in both English Language Arts and mathematics were based on the Florida Standards (FDOE, 2017b). “The State of Florida’s official source for standards information and course descriptions” is known as CPALMS (Florida State University, 2017a). Every standard for English Language Arts and mathematics (as well as many other subjects) can be found on the CPALMS website (Florida State University, 2017b).

There are six strands of English Language Arts standards for Grade 4 that consist of (a) language standards, (b) reading standards for informational text, (c) reading standards for literature, (d) reading standards foundational skills K-5, (e) standards for speaking and listening, and (f) writing standards. In Grade 8, there are five strands of English Language Arts standards that consist of (a) language standards, (b) reading standards for informational text, (c) reading standards for literature, (d) standards for speaking and listening, and (e) writing standards. In Grade 10, there are eight strands of English Language Arts standards that include (a) language standards, (b) reading standards for informational text, (c) reading standards for literacy in history/social studies 6-12, (d) reading standards for science and technical subjects 6-12, (e) reading standards for literature, (f) standards for speaking and listening, and (g) writing standards, and (h) writing standards for literacy in history/social studies, science, and technical subjects (Florida State University, 2017b).

In mathematics, there are five strands for fourth grade that include (a) geometry, (b) measurement and data, (c) number and operations—fractions, (d) number and operations in base 10, and (e) operations and algebraic thinking. The five strands in

mathematics for eighth-grade include (a) expressions and equations, (b) functions, (c) geometry, (d) statistics and probability, and (e) the number system (Florida State University, 2017b).

FSA scores for each student have been reported as scale scores; but for schools and school districts they are reported as mean scale scores (FDOE, 2016a). The ELA test is described by the FDOE, as follows:

In grades 4 through 10, the FSA ELA test includes two components, which are combined to provide a whole-test FSA ELA scale score:

1. A text-based Writing component in which students respond to one writing task.
2. A reading, language, and listening component in which students respond to texts and multimedia content (FDOE, 2016e).

Scale scores are used to enable comparison of scores on different versions of a test (Tan & Michel, 2011). Scale scores make it possible to compare student achievement across multiple versions and levels of the FSA (FDOE, 2016f). Although scale scores are reported for the individual student, school scores are mean scale scores and are determined by finding the mean of the scale scores for all students who took the test at the school level (FDOE, 2016a).

Reliability and validity of the FSA were also described in detail by the FDOE (2016b). Reliability indicates that multiple administrations of the FSA yield equivalent scores. It refers to “the consistency of test scores” (FDOE, 2016b, p. 2). The test contractor, American Institutes for Research, conducted numerous statistical measures and determined that the FSA did produce consistent test scores (FDOE, 2016b).

Validity refers to the test measuring what it purports to measure. It becomes a professional judgment based on evidence.

Supporting a validity argument requires multiple sources of validity evidence. This then allows for one to evaluate if sufficient evidence has been presented to support the intended uses and interpretations of the test scores. Thus, determining the validity of a test first requires an explicit statement regarding the intended uses of the test scores, and subsequently, evidence that the scores can be used to support these inferences (FDOE, 2016b, p. 6).

The FSA was designed to measure student attainment of the Florida Standards.

Those standards were the basis for the design of the test (FDOE, 2016a, 2016b, 2016e).

After examining the content standards, the test specifications, and the internal structure of the FSA, the test contractor determined that the FSA was a valid measure of the Florida Standards (FDOE, 2016b).

Evidence of validity was determined using both correlations and confirmatory factor analysis. For both the ELA and mathematics tests, results were correlated across the different strands at each test level and were then analyzed using factor analysis and goodness-of-fit models. The goodness-of-fit models used were the root mean square error of approximation, the Tucker-Lewis Index, and the comparative fit index. All of these measures indicated that the FSA ELA and mathematics tests were valid instruments to measure student attainment of the Florida Standards that the tests were designed to measure (FDOE, 2016b).

Data Collection

This study used quantitative data (mean scale scores) for each reporting charter school in fourth-, eighth-, and tenth-grade ELA and fourth- and eighth-grade mathematics on the Spring 2016 administration of the FSA. The data were publicly available from the FDOE. In addition to test score data, demographic data on the charter schools (also publicly available) were obtained to include the charter school's management model,

percentage of students in poverty (as measured by percentage of students participating in free and reduced price lunch), percentage of students who were minorities (as measured by percentage of students who were non-white), percentage of students who were disabled, percentage of students who were ELL, and school cohort size (as measured by the reported school population divided by the number of grades served by the school). All data were downloaded from the FDOE website (FDOE, 2016c, 2017a).

The data were entered into a single Excel spreadsheet for ease of analysis. The spreadsheet contained columns for school name, school number (a unique five- or six-digit number consisting of the one- or two-digit county code immediately followed without space by the four-digit, state-issued school code), district name, year opened, grade levels authorized, management model, fourth-grade ELA mean scale score, eighth-grade ELA mean scale score, 10th-grade ELA mean scale score, fourth-grade mathematics mean scale score, 10th-grade mathematics mean scale score, number of grades the school offered during the 2015-2016 school year, the school cohort size, the school population, the school cohort size category (1-41 students – low; 42-90 students – medium; 91-445 students – high), percentage of white students, percentage of minority students, percentage of disabled students, percentage of ELL students, percentage of non-ELL students, percentage of students who are in poverty, and percentage of students in poverty category (0.0 to 25.9% – low; 26.0 to 62.9% – medium; 63.0 to 100% – high). The purpose for creation of categories (high, medium, and low) for school cohort size and poverty was to make it possible to effectively use the data as moderator variables. Because school cohort size ranged between 9 and 445 and poverty ranged from zero to 100%, there was an excessive number of categories in the calculation,

resulting in a large number of degrees of freedom. This skewed the results and made them less meaningful. Also, ANCOVA assumes roughly equal size groups.

Accordingly, the categories were created to contain approximately equal numbers of cases so the ANCOVA results would be more meaningful and the data would meet the ANCOVA assumption of group equality. The spread sheet was then imported into the Statistical Package for Social Sciences (SPSS 23) for analysis. Creating the two categorical groups made it possible to effectively analyze the moderator variables.

Data Analysis

A simple way to analyze the data would be to run an independent samples *t*-test to compare results for the two groups of charter schools and test for significance. Although this would yield appropriate results, it would not allow for a closer examination of some relevant school characteristics that might have influenced those results. Specifically, using a *t*-test alone would not permit analysis of the effects of school cohort size, poverty, minority status, disabilities, and ELL on the data. Accordingly, a stronger analysis model was selected to not only observe variance between student achievement in charter school management models, but to examine more closely those factors including school cohort size, poverty, ELL status, disability status, and minority status and how they influenced achievement in charter schools.

Using SPSS 23, a two-way ANCOVA (a factorial analysis) was performed on the data using the school cohort size category and the poverty category as the moderator variables and the ELL, disability, and minority percentages as the covariates. The moderator variables were each run independently along with the covariate data to analyze each of the dependent variables. ANCOVA is a combination of analysis of variance and

regression analysis. ANCOVA “can be discussed as...an extension of analysis of variance” (Wildt & Ahtola, 1978, p. 8). Because each charter school had differences in school cohort size, poverty, racial composition, students with disabilities and students who were ELL, ANCOVA was an appropriate test. ANCOVA “provides a means to statistically adjust the dependent variable for these preexisting differences” (Wildt & Ahtola, 1978, p. 17).

The variables for analysis are presented in Table 1. Table 1 illustrates the 10 groups of variables (i.e., the five dependent variables paired with each of the two different moderator variables and the same three covariates that were examined). To determine the effect size, a partial Eta squared was calculated for each of the 10 variable groups. The results for each of these analyses including effect sizes are presented in 10 individual tables in Chapter 4.

Table 1

Variables for Analysis

Grade	Subject	Management Model	Moderator Variable	Covariates %
4	ELA	For-Profit/Not-for-Profit	School Cohort Size	Minority Disability ELL
4	ELA	For-Profit/Not-for-Profit	Poverty	Minority Disability ELL
4	Mathematics	For-Profit/Not-for-Profit	School Cohort Size	Minority Disability ELL
4	Mathematics	For-Profit/Not-for-Profit	Poverty	Minority Disability ELL
8	ELA	For-Profit/Not-for-Profit	School Cohort Size	Minority Disability ELL
8	ELA	For-Profit/Not-for-Profit	Poverty	Minority Disability ELL
8	Mathematics	For-Profit/Not-for-Profit	School Cohort Size	Minority Disability ELL
8	Mathematics	For-Profit/Not-for-Profit	Poverty	Minority Disability ELL
10	ELA	For-Profit/Not-for-Profit	School Cohort Size	Minority Disability ELL
10	ELA	For-Profit/Not-for-Profit	Poverty	Minority Disability ELL

Note. ELA = English Language Arts; ELL = English language learners

For each of the five major groups of data (1) fourth-grade ELA, (2) fourth-grade mathematics, (3) eighth-grade ELA, (4) eighth-grade mathematics, and (5) 10th-grade ELA, descriptive statistics including the number of cases in each group, the mean, the

minimum, the maximum, and the standard deviation of the mean scale scores on the 2016 FSA were reported. Those data served to summarize the central tendency and distribution of the population. The mean as a measure of central tendency is the central point around which the test scores cluster. The standard deviation shows the dispersion or “the average distance from the mean” for those scores (Steinberg, 2011, p. 507).

Summary

This chapter explained how the study was completed to answer the two research questions. The research questions examined student achievement in charter schools as measured on the 2016 FSA ELA in Grades 4, 8, and 10, and in mathematics in Grades 4 and 8 to determine if their management model (not-for-profit or for-profit) affected the schools’ performance. The participants were identified and consisted of the population of reporting charter schools on the selected grade levels and tests of the 2016 FSA. The instrumentation was reviewed, including the validity and reliability of the testing instrument. The method for data collection was described along with the analysis used to examine the data. In the following chapter, the results of this investigation are presented.

CHAPTER 4 RESULTS

Introduction

This study was designed to examine student achievement in charter schools, with an explicit focus on disclosing differences based on the school's management model (for-profit or not-for-profit) while factoring in the effects of the school's poverty, cohort size, minority, disability, and ELL composition. The chapter contains three sections: (a) descriptive statistics, (b) ANCOVA results for the research questions, and (c) summary. This chapter presents the results of the analyses, using data disaggregated by grade level and subject, performed to respond to the following two research questions which guided the study.

1. In what ways and to what extent does performance on fourth-, eighth-, and tenth-grade state English Language Arts (reading) achievement measures vary between for-profit and not-for-profit charter schools in Florida?

2. In what ways and to what extent does performance on fourth- and eighth-grade state mathematics achievement measures vary between for-profit and not-for-profit charter schools in Florida?

Descriptive Statistics

Although the study's population consisted of all 530 charter schools that reported scores on the 2016 FSA in fourth-grade ELA and mathematics, eighth-grade ELA and mathematics, and 10th-grade ELA, the results are reported by grade level and subject. For fourth-grade ELA, 320 schools reported results. Of those 320 schools, 166 were managed by not-for-profit management entities, and 154 were managed by for-profit

management entities. The mean scale score for all charter schools on the fourth-grade FSA ELA test in 2016 was 310.92. For the not-for-profit schools, the mean scale score was 311.11, and for the for-profit schools, the mean scale score was 310.72. Overall, fourth-grade ELA mean scale scores ranged from 268 to 333. The not-for-profit schools scored between 268 and 333, and the for-profit schools scored between 277 and 330. The overall standard deviation was 10.45. The not-for-profit schools had a standard deviation of 11.52, and the for-profit schools had a standard deviation of 9.19. The results for fourth-grade ELA are presented in Table 2.

Table 2

Descriptive Statistics for Fourth-Grade English Language Arts (ELA)

Management Model	N	Mean	Standard Deviation	Minimum Score	Maximum Score
Not-for-Profit	166	311.11	11.52	268	333
For-Profit	154	310.72	9.19	277	330
All Schools	320	310.92	10.45	268	333

For eighth-grade ELA, 252 schools reported results. Of those, 120 were managed by not-for-profit management entities, and 132 were managed by for-profit management entities. The mean scale score for all charter schools on the eighth-grade FSA ELA test in 2016 was 341.11. For the not-for-profit schools the mean scale score was 341.42, and for the for-profit schools, the mean scale score was 340.84. Overall, eighth-grade ELA mean scale scores ranged from 298 to 370. The not-for-profit schools scored between 298 and 365, and the for-profit schools scored between 310 and 370. The overall standard deviation was 11.29. The not-for-profit schools had a standard deviation of

12.63, and the for-profit schools had a standard deviation of 9.96. The results for eighth-grade ELA are presented in Table 3.

Table 3

Descriptive Statistics for Eighth-Grade English Language Arts (ELA)

Management Model	N	Mean	Standard Deviation	Minimum Score	Maximum Score
Not-for-Profit	120	341.42	12.63	298	365
For-Profit	132	340.84	9.96	310	370
All Schools	252	341.11	11.29	298	370

For 10th-grade ELA, 121 schools reported results. Of those, 53 were managed by not-for-profit management entities and 68 were managed by for-profit management entities. The mean scale score for all charter schools on the 10th-grade FSA ELA test in 2016 was 345.02. For the not-for-profit schools the mean scale score was 350.25; for the for-profit schools, the mean scale score was 340.94. Overall, eighth-grade ELA mean scale scores ranged from 311 to 375. The not-for-profit schools scored between 315 and 375, and the for-profit schools scored between 311 and 370. The overall standard deviation was 15.83. The not-for-profit schools had a standard deviation of 14.35, and the-for profit schools had a standard deviation of 15.82. The results for eighth-grade ELA are presented in Table 4.

Table 4

Descriptive Statistics for 10th-Grade English Language Arts (ELA)

Management Model	N	Mean	Standard Deviation	Minimum Score	Maximum Score
Not-for-Profit	53	350.25	14.35	315	375
For-Profit	68	340.94	15.82	311	370
All Schools	121	345.02	15.83	311	375

For fourth-grade mathematics, 319 schools reported results. Of those 319 schools, 166 were managed by not-for-profit management entities, and 153 were managed by for-profit management entities. The mean scale score for all charter schools on the fourth-grade FSA mathematics test in 2016 was 313.28. For the not-for-profit schools, the mean scale score was 313.16, and for the for-profit schools, the mean scale score was 313.42. Overall, fourth-grade mathematics mean scale scores ranged from 268 to 345. The not-for-profit schools scored between 268 and 345, and the for-profit schools scored between 273 and 338. The overall standard deviation was 12.26. The not-for-profit schools had a standard deviation of 13.06, and the for-profit schools had a standard deviation of 11.37. The results for eighth-grade mathematics are presented in Table 5.

Table 5

Descriptive Statistics for Fourth-grade Mathematics

Management Model	N	Mean	Standard Deviation	Minimum Score	Maximum Score
Not-for-Profit	166	313.16	13.06	268	345
For-Profit	153	313.42	11.37	273	338
All Schools	319	313.28	12.26	268	345

For eighth-grade mathematics, 235 schools reported results. Of those 235 schools, 114 were managed by not-for-profit management entities and 121 were managed by for-profit management entities. The mean scale score for all charter schools on the eighth-grade FSA mathematics test in 2016 was 336.62. For the not-for-profit schools, the mean scale score was 338.19, and for the for-profit schools, the mean scale score was 335.14. Overall, eighth-grade mathematics mean scale scores ranged from 296 to 378.

The not-for-profit schools scored between 296 and 378, and the for-profit schools scored between 306 and 371. The overall standard deviation was 13.85. The not-for-profit schools had a standard deviation of 15.43, and the-for profit schools had a standard deviation of 12.04. The results for fourth-grade mathematics are presented in Table 6.

Table 6

Descriptive Statistics for Eighth-grade Mathematics

Management Model	N	Mean	Standard Deviation	Minimum Score	Maximum Score
Not-for-Profit	114	338.19	15.43	296	378
For-Profit	121	335.14	12.04	306	371
All Schools	235	336.62	13.85	296	378

Descriptive statistics for the moderator variables and the covariates are compiled for all of the 530 charter schools in the population. The moderator variables were school cohort size and poverty. For the school cohort size (the total school population divided by the number of grades in the school) the mean was 83.79, the standard deviation was 69.85, and the range was 9 to 445. For poverty level (the percent of students on free and reduced lunch) the mean percentage was 45.92, the standard deviation was 29.86, and the range was 0 to 100 percent.

The covariates were percent of minority students, percent of disabled students, and percent of English language learners. For minority students the mean was 66.07 percent, the standard deviation was 28.24, and the range was 2.60 percent to 100 percent. For disabled students, the mean was 9.22 percent, the standard deviation was 9.78, and the range was from 0 percent to 100 percent. For English language learners, the mean

was 9.11 percent, the standard deviation was 11.46, and the range was 0 percent to 80.70 percent.

ANCOVA Results for the Research Questions

Research Question 1

In what ways and to what extent does performance on fourth, eighth, and tenth-grade state English Language Arts (reading) achievement measures vary between for-profit and not-for-profit charter schools in Florida?

The mean scale scores on the 2016 FSA fourth, eighth, and 10th-grade ELA for each charter school were compared using a two-way analysis of covariance (ANCOVA). Covariates and moderator variables were included in the study to control for their influence on student achievement and to investigate the possibility of interaction effects influencing student achievement. Each school's cohort size (expressed as total school enrollment divided by the number of grades in the school) and poverty level (expressed as the percentage of students eligible for free and reduced lunch), were the moderator variables. Each school's racial composition (expressed as the percentage of minority students), disabled students (expressed as the percentage of students with disabilities), and English Language Learners (expressed as the percentage of English Language Learners) were factored in as covariate variables.

As presented in the previous section of this chapter in Tables 2 through 6, the not-for-profit charter schools had higher mean scale scores than the for-profit charter schools with the exception of fourth-grade mathematics. To determine the significance of those differences and to see if the moderator variables or the covariates had an influence on the outcome, an ANCOVA was run using SPSS 23. Effect size was calculated by utilizing partial Eta squared results. Tabachnick & Fidell (1989) defined partial Eta squared

differences as small if .01-.08; medium as .09 to .24; and large as .25 or more. Effect size is used to determine if the statistically significant difference is a “meaningful” difference (Steinberg, 2011, p. 395). The interaction effect occurs “when one independent variable has a significant effect on the dependent variable, but only under certain levels or conditions of the other independent variable” (Steinberg, 2011, p. 339). In this study, interaction effects could occur between poverty or the school cohort size on the management model.

Table 7 presents the results for fourth-grade ELA with school cohort size as the moderator variable. Those results show that the differences in scores between the management model alone, $F(1, 319)=2.08$, $p=.150$, or the interaction effect, that is the interaction between the management model and the school cohort size, $F(2, 319)=0.39$, $p=.674$, and ELL status, $F(1, 319)=0.05$, $p=.821$ have more than five chances in 100 that they are due to mere chance, and, therefore were not significant. The minority status, $F(1, 319)=53.93$, $p<.001$, the disability status, $F(1,319)=147.82$, $p<.001$, and the school cohort size, $F(2, 319)=8.87$, $p<.001$ have less than one chance in 100 that the results are due to mere chance and, therefore, were significant.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, and school cohort size. For minority status, partial Eta squared was .15, a medium effect size; for disability status it was .32, a large effect size; and for school cohort size it was .05, a small effect size.

Table 7

ANCOVA: Fourth-grade English Language Arts (ELA) with School Cohort Size

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	3375.97	53.93	.000	.15
Disability	1	9252.55	147.82	.000	.32
ELL	1	3.20	0.05	.821	.00
Management Model	1	130.46	2.08	.150	.01
Cohort Size	2	555.49	8.87	.000	.05
Management Model* Cohort Size	2	24.75	0.39	.674	.00

The results for fourth-grade ELA with poverty as the moderator variable are presented in Table 8. Those results show that the differences in scores between the management model alone, $F(1, 319)=2.73$, $p=.099$, or the interaction effect, that is the interaction between the management model and poverty, $F(2, 319)=2.05$, $p=.130$ and ELL status, $F(1, 319)=2.28$, $p=.132$ have more than five chances in 100 that they are due to mere chance, and therefore were not significant. The minority status, $F(1, 319)=28.14$, $p<.001$, the disability status, $F(1, 319)=182.17$, $p<.001$, and poverty, $F(2, 319)=27.27$, $p<.001$ have less than one chance in 100 that the results are due to mere chance and therefore, were significant.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, and poverty. For minority status, partial Eta squared was .08, a small effect size; for disability status it was .37, a large effect size; and for poverty it was .15, a medium effect size.

Table 8

ANCOVA: Fourth-grade English Language Arts (ELA) with Poverty

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	1573.67	28.14	.000	.08
Disability	1	10186.93	182.17	.000	.37
ELL	1	127.68	2.28	.132	.01
Management Model	1	152.88	2.73	.099	.01
Poverty	2	1524.85	27.27	.000	.15
Management Model*Poverty	2	114.88	2.05	.130	.01

Table 9 presents the results for eighth-grade ELA with school cohort size as the moderator variable. Those results show that the differences in scores between the management model alone, $F(1, 251) = 2.58$, $p = .110$, or the interaction effect, that is the interaction between the management model and the school cohort size, $F(2, 251) = 0.48$, $p = .616$ have more than five chances in 100 that they are due to mere chance, and therefore were not significant. The minority status, $F(1, 251) = 8.76$, $p = .003$, the disability status, $F(1, 251) = 71.10$, $p < .001$, the ELL status $F(1, 251) = 5.72$, $p = .017$, and the school cohort size $F(2, 251) = 4.62$, $p = .011$ have less than two chances in 100 that the results are due to mere chance and, therefore, were significant.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, ELL, and school cohort size. For minority status, partial Eta squared was .04, a large effect size; for disability status it was .23, a medium effect size; for ELL it was .02, a small effect size; and for school cohort size it was .04, a small effect size.

Table 9

ANCOVA: Eighth-grade English Language Arts (ELA) with School Cohort Size

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	782.44	8.77	.003	.04
Disability	1	6346.62	71.10	.000	.23
ELL	1	510.95	5.72	.017	.02
Management Model	1	230.29	2.58	.110	.01
Cohort Size	2	412.26	4.62	.011	.04
Management Model* Cohort Size	2	43.29	0.48	.616	.00

The results for eighth-grade ELA with poverty as the moderator variable are presented in Table 10. Those results show that the differences in scores between the management model alone, $F(1, 251) = 2.56$, $p = .111$, or the interaction effect, that is the interaction between the management model and poverty, $F(2, 251) = 2.52$, $p = .083$, minority status, $F(1, 251) = 2.40$, $p = .123$ and ELL, $F(1, 251) = 1.93$, $p = .166$ have more than five chances in 100 that they are due to mere chance, and therefore were not significant. The disability status, $F(1, 251) = 87.70$, $p < .001$ and poverty, $F(2, 251) = 9.33$, $p < .001$ have less than one chance in 100 that the results are due to mere chance and, therefore, were significant.

The test for effect size, partial Eta squared, was considered only for the significant results, disability status, and poverty. For disability status, partial Eta squared was .27, a large effect size, and for poverty it was .07, a small effect size.

Table 10

ANCOVA: Eighth-grade English Language Arts (ELA) with Poverty

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	204.23	2.40	.123	.01
Disability	1	7459.42	87.70	.000	.27
ELL	1	164.30	1.93	.166	.01
Management Model	1	217.68	2.56	.111	.01
Poverty	2	793.13	9.33	.000	.07
Management Model*Poverty	2	214.30	2.52	.083	.02

Table 11 presents the results for 10th-grade ELA with school cohort size as the moderator variable. Those results show that the differences in scores between the management model alone, $F(1, 120) = 3.50$, $p = .064$, and the school cohort size, $F(2, 120) = 1.45$, $p = .238$ have more than five chances in 100 that they are due to mere chance, and therefore were not significant. The minority status, $F(1, 120) = 9.68$, $p = .002$, the disability status, $F(1, 120) = 41.41$, $p < .001$, the ELL status $F(1, 120) = 4.23$, $p = .042$, and the interaction effect, that is the interaction between the management model and the school cohort size, $F(2, 120) = 5.56$, $p = .005$ have less than five chances in 100 that the results are due to mere chance and, therefore, were significant.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, ELL, and management model combined with school cohort size. For minority status, partial Eta squared was .08, a small effect size; for disability status it was .27, a large effect size; for ELL it was .04, a small effect size; and for the interaction effect or the management model combined with school cohort size, it was .09, a medium effect size.

Table 11

ANCOVA: 10th-grade English Language Arts (ELA) with School Cohort Size

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	1355.38	9.68	.002	.08
Disability	1	5796.89	41.41	.000	.27
ELL	1	591.66	4.23	.042	.04
Management Model	1	489.95	3.50	.064	.03
Cohort Size	2	203.33	1.45	.238	.03
Management Model* Cohort Size	2	778.37	5.56	.005	.09

A plot of the interaction effect of the management model and the school cohort size is depicted in Figure 1 which shows that for-profit charter schools had higher mean scale scores when the school cohort class was small. However, when the school cohort class was medium or high, the not-for-profit charter schools had higher mean scale scores.

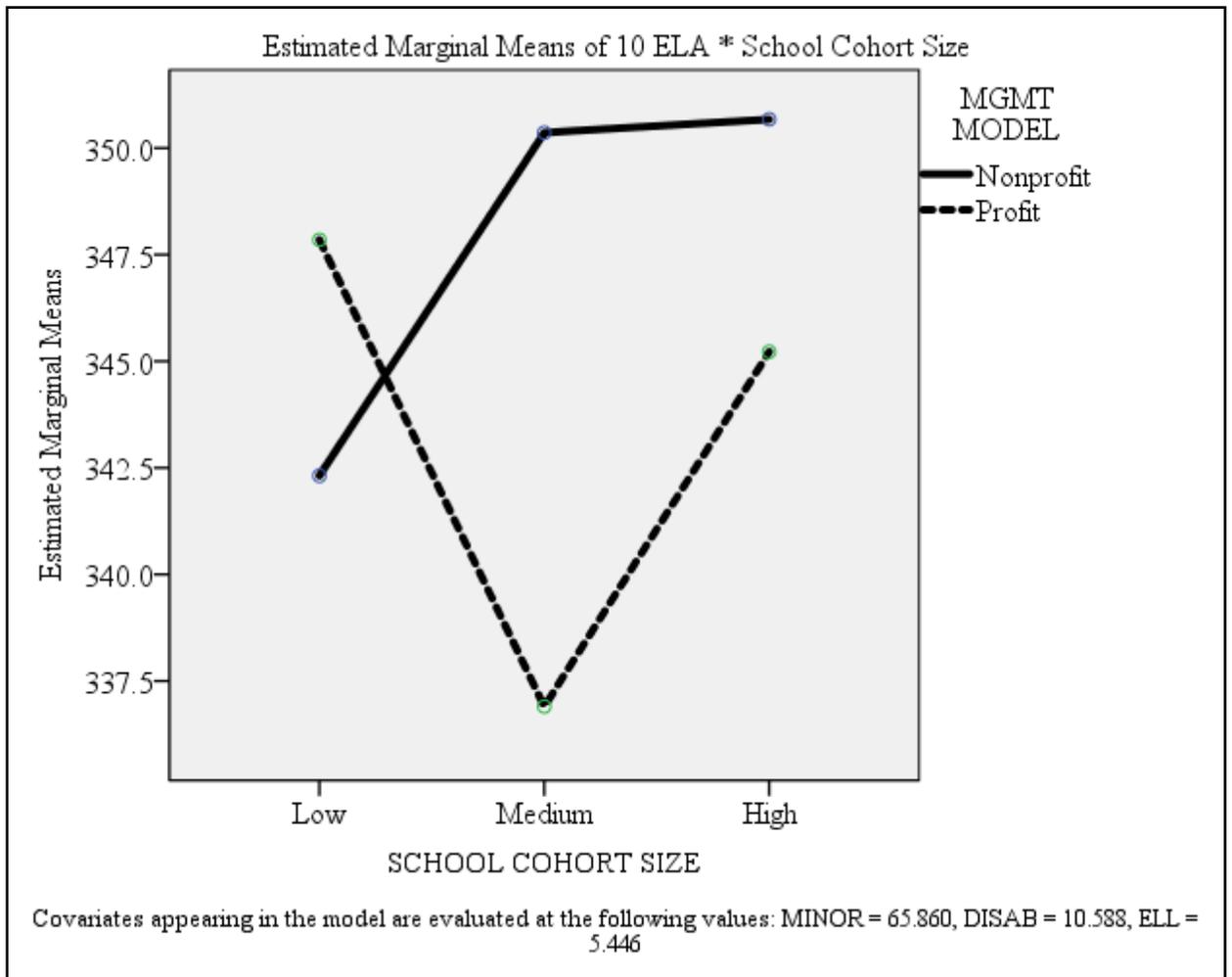


Figure 1. Grade 10 English Language Arts (ELA): Interaction effect between management model and school cohort size

The results for 10th-grade ELA with poverty as the moderator variable are presented in Table 12. Those results show that the difference in scores between poverty alone, $F(2, 120) = 0.731$, $p = .484$ has more than five chances in 100 that it is due to mere chance, and therefore was not significant. The minority status, $F(1, 120) = 4.131$, $p = .044$, disability status, $F(1, 120) = 43.959$, $p < .001$, ELL, $F(1, 120) = 4.54$, $p = .035$, the management model, $F(1, 120) = 5.42$, $p = .022$, and the interaction effect, that is the interaction between the management model and poverty, $F(2, 120) = 3.66$, $p = .029$ have

less than one chance in 100 that the results are due to mere chance and therefore, were significant.

The main effect, that is the effect of the management model, demonstrated a statistically significant difference between not-for-profit and for-profit charter schools. As presented in Table 4, the mean scale score of not-for-profit charter schools was 350.24, and the mean scale score of for-profit charter schools was 340.94.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, ELL, management model, and management model combined with poverty. For minority status, partial Eta squared was .04, a small effect size; for disability status it was .28, a large effect size; for ELL it was .04, a small effect size; for the management model it was .05, a small effect size; and for the interaction effect or the management model combined with poverty it was .06, a small effect size.

Table 12

ANCOVA: 10th-grade English Language Arts (ELA) with Poverty

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	613.78	4.13	.044	.04
Disability	1	6531.36	43.96	.000	.28
ELL	1	674.60	4.54	.035	.04
Management Model	1	805.36	5.42	.022	.05
Poverty	2	108.59	0.73	.484	.01
Management Model*Poverty	2	543.21	3.66	.029	.06

A plot of the interaction effect of the management model and poverty is depicted in Figure 2 which shows that not-for-profit profit charter schools have higher mean scale

scores when poverty is low or medium. However, when poverty is high, the for-profit charter schools have higher mean scale scores.

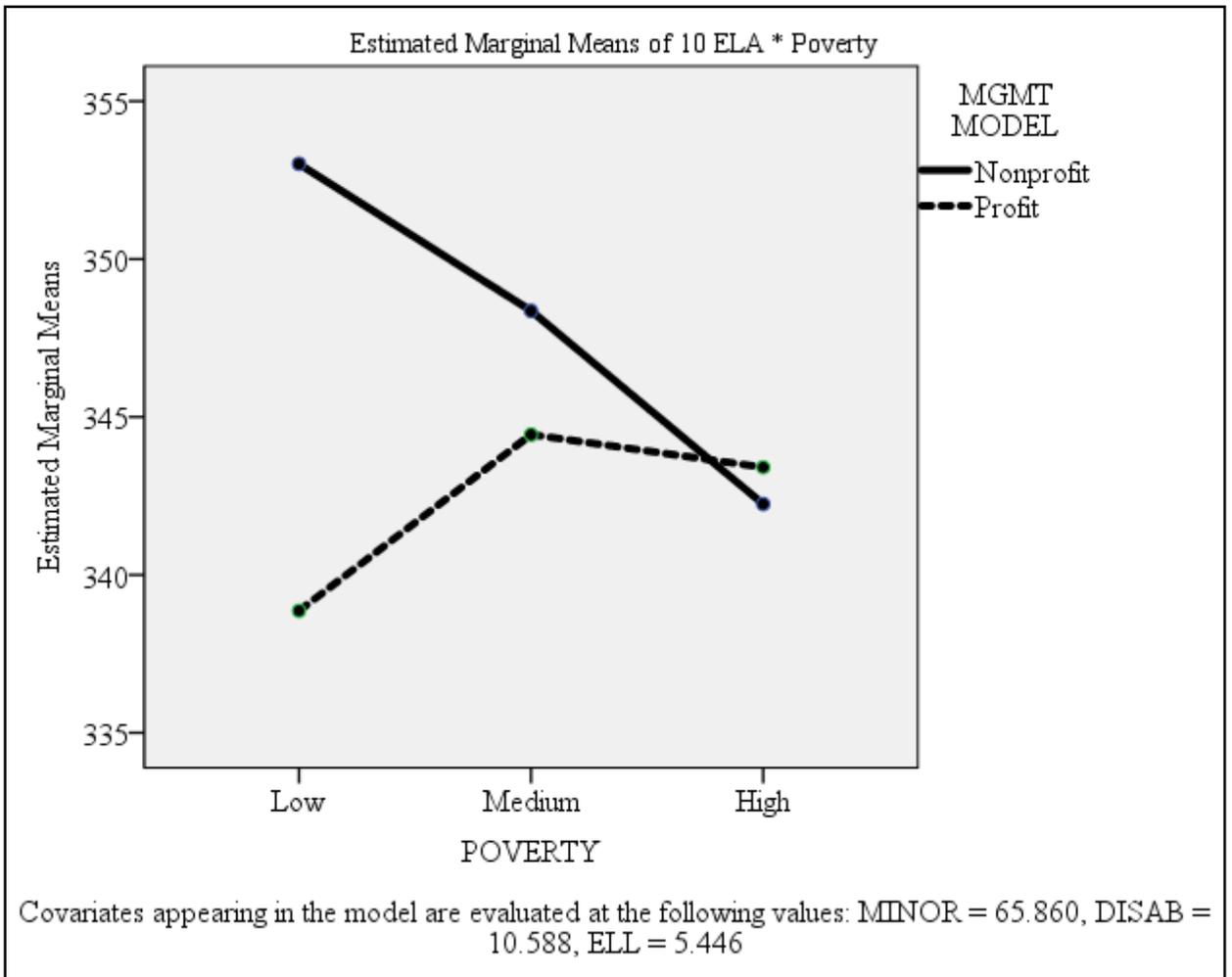


Figure 2. Grade 10 English Language Arts (ELA): Interaction effect between management model and school poverty.

Research Question 2

In what ways and to what extent does performance on fourth and eighth-grade state mathematics achievement measures vary between for-profit and not-for-profit charter schools in Florida?

Each school's cohort size (expressed as total school enrollment divided by the number of grades in the school) and poverty level (expressed as the percentage of students eligible for free and reduced lunch), were the moderator variables. Each

school's racial composition (expressed as the percentage of minority students), disabled students (expressed as the percentage of students with disabilities), and English Language Learners (expressed as the percentage of English Language Learners) were factored in as covariate variables.

Table 13 presents the results for fourth grade mathematics with school cohort size as the moderator variable. Those results show that the differences in scores between the management model alone, $F(1, 318) = 0.64, p = .425$, the interaction effect, that is the interaction between the management model and school cohort size, $F(2, 318) = 51.90, p = .619$, and ELL status, $F(1, 318) = 0.09, p = .761$ have more than five chances in 100 that they are due to mere chance, and therefore were not significant. The minority status, $F(1, 318) = 34.54, p < .001$, the disability status, $F(1, 318) = 46.18, p < .001$, and the school cohort size, $F(2, 318) = 14.78, p < .001$ have less than one chance in 100 that the results are due to mere chance and, therefore, were significant.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, and school cohort size. For minority status, partial Eta squared was .10, a medium effect size, for disability status it was .13, a medium effect size, and for school cohort class it was .09, a medium effect size.

Table 13

ANCOVA: Fourth-grade Mathematics with School Cohort Size

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	3731.71	34.54	.000	.100
Disability	1	4990.15	46.18	.000	.130
ELL	1	10.04	0.09	.761	.000
Management Model	1	68.87	0.64	.425	.002
Cohort Size	2	1597.15	14.78	.000	.087
Management Model* Cohort Size	2	51.90	0.48	.619	.003

The results for fourth grade mathematics with poverty as the moderator variable are presented in Table 14. Those results show that the differences in scores between the management model alone, $F(1, 318) = 0.06$, $p = .806$, the interaction effect, that is the interaction between the management model and poverty, $F(2, 318) = 1.40$, $p = .249$, and ELL, $F(1, 318) = 3.60$, $p = .059$ have more than five chances in 100 that they are due to mere chance, and therefore were not significant. The minority status, $F(1, 318) = 17.35$, $p < .001$, the disability status, $F(1, 318) = 54.67$, $p < .001$, and poverty, $F(2, 318) = 17.27$, $p < .001$ have less than one chance in 100 that the results are due to mere chance and therefore, were significant.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, and poverty. For minority status, partial Eta squared was .05, a small effect size; for disability status it was .15, a medium effect size; and for poverty it was .10, a medium effect size.

Table 14

ANCOVA: Fourth-grade Mathematics with Poverty

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	1836.14	17.35	.000	.05
Disability	1	5786.95	54.67	.000	.15
ELL	1	380.74	3.60	.059	.01
Management Model	1	6.37	0.06	.806	.00
Poverty	2	1827.63	17.27	.000	.10
Management Model*Poverty	2	147.77	1.40	.249	.01

Table 15 presents the results for eighth-grade mathematics with school cohort size as the moderator variable. Those results show that the differences in scores between the interaction effect, that is the interaction between the management model and the school cohort size, $F(2, 234) = 0.81$, $p = .447$, and ELL, $F(1, 234) = 0.30$, $p = .582$ have more than five chances in 100 that they are due to mere chance, and therefore were not significant. The minority status, $F(1, 234) = 11.78$, $p = .001$, the disability status, $F(1, 234) = 36.44$, $p < .001$, the main effect, or the effect of the management model $F(1, 234) = 8.06$, $p = .005$, and the school cohort size $F(2, 234) = 10.56$, $p < .001$ have less than one chance in 100 that the results are due to mere chance and, therefore, were significant.

The main effect, that is the effect of the management model, demonstrated a statistically significant difference between not-for-profit and for-profit charter schools. As presented in Table 6, the mean scale score of not-for-profit charter schools was 338.19, and the mean scale score of for-profit charter schools was 335.14.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, management model, and school cohort size. For

minority status, partial Eta squared was .05, a small effect size; for disability status it was .14, a medium effect size; for the management model it was .03, a small effect size; and for school cohort size it was .08, a small effect size.

Table 15

ANCOVA: Eighth-grade Mathematics with School Cohort Size

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	1685.92	11.78	.001	.05
Disability	1	5215.80	36.44	.000	.14
ELL	1	43.39	0.30	.582	.00
Management Model	1	1153.48	8.06	.005	.03
Cohort Size	2	1511.81	10.56	.000	.08
Management Model* Cohort Size	2	115.52	0.81	.447	.01

The results for eighth-grade mathematics with poverty as the moderator variable are presented in Table 16. Those results show that the differences in scores between the interaction effect, that is the interaction between the management model and poverty, $F(2, 234) = 0.67, p = .513$, and ELL, $F(1, 234) = 0.71, p = .401$ have more than five chances in 100 that they are due to mere chance, and therefore were not significant. The minority status, $F(1, 234) = 5.77, p = .017$, disability status, $F(1, 234) = 49.46, p < .001$, management model, $F(1, 234) = 4.80, p = .030$, and poverty, $F(2, 234) = 3.60, p = .029$, have less than five chances in 100 that the results are due to mere chance and, therefore, were significant.

The main effect, that is the effect of the management model, demonstrated a statistically significant difference between not-for-profit and for-profit charter schools.

As presented in Table 6, the mean scale score of not-for-profit charter schools was 338.19, and the mean scale score of for profit charter schools was 335.14.

The test for effect size, partial Eta squared, was considered only for the significant results, minority status, disability status, management model, and poverty. For minority status, partial Eta squared was .02, a small effect size; for disability status it was .18, a medium effect size; for the management model it was .02, a small effect size; and for poverty it was .03, a small effect size.

Table 16

ANCOVA: Eighth-grade Mathematics with Poverty

Source	Degrees of Freedom	Mean Squares	F	Significance	Partial Eta Squared
Minority	1	872.42	5.77	.017	.02
Disability	1	7477.76	49.46	.000	.18
ELL	1	107.17	0.71	.401	.00
Management Model	1	725.21	4.80	.030	.02
Poverty	2	544.58	3.60	.029	.03
Management Model*Poverty	2	101.25	0.67	.513	.01

Summary

This chapter reviewed the results of the investigation into differences in Florida charter school student achievement on the fourth-, eighth-, and 10th-grade 2016 FSA based on the charter school management model (for-profit or not-for-profit). The results indicated that differences in achievement levels between for-profit and not-for-profit schools were statistically significant for only three of 10 achievement measures. In contrast, the covariates were more often statistically significant in explaining the score

differences between the for-profit and the not-for-profit charter schools. The researcher also investigated the influence of moderator variables (school cohort size and poverty) along with the covariates of minority status, disability status, and ELL status.

Table 17 summarizes all categories where there were significant findings. With the exception of eighth-grade mathematics with the school cohort size and poverty moderator variables, and 10th-grade ELA with the poverty moderator variable, the charter school's management model did not have a statistically significant impact on student achievement. School cohort size was statistically significant in fourth and eighth-grade ELA and mathematics, and poverty was statistically significant in fourth- and eighth-grade ELA and mathematics.

Table 17

Summary of Statistically Significant Findings

Grade and Subject	Moderator	Significant Factors	Significance
4 ELA	School Cohort Size	Minority	<.001
		Disability	<.001
		Cohort Size	<.001
4 ELA	Poverty	Minority	<.001
		Disability	<.001
		Poverty	<.001
8 ELA	School Cohort Size	Minority	.003
		Disability	<.001
		ELL	.017
		Cohort Size	.011
8 ELA	Poverty	Disability	<.001
		Poverty	<.001
10 ELA	School Cohort Size	Minority	.002
		Disability	<.001
		ELL	.042
		Management/Cohort Size Interaction	.005
10 ELA	Poverty	Minority	.044
		Disability	<.001
		ELL	.035
		Management	.022
		Management/Poverty Interaction	.029
4 Mathematics	School Cohort Size	Minority	<.001
		Disability	<.001
		Cohort Size	<.001
4 Mathematics	Poverty	Minority	<.001
		Disability	<.001
		Poverty	<.001
8 Mathematics	School Cohort Size	Minority	.001
		Disability	<.001
		Management	.005
		Cohort Size	<.001
8 Mathematics	Poverty	Minority	.017
		Disability	<.001
		Management	.030
		Poverty	.029

The main effect, that is the effect of the management model (for-profit or not-for-profit) having an effect on the mean scale scores was only significant in 10th-grade ELA with poverty as the moderator variable and in eighth-grade mathematics with both school cohort size and poverty as the moderator variables. The interaction of the management model and the school cohort size as well as the interaction of the management model and poverty were statistically significant only for 10th-grade ELA. Disability status was statistically significant across all grades and subjects. Minority status was statistically significant in all grades and subjects except for eighth-grade ELA, and ELL was statistically significant in eighth-grade ELA with both school cohort size and poverty moderators and in 10th-grade ELA with poverty moderators. That means the covariates did account for some of the variance in a statistically significant way.

Chapter 5 contains a discussion of these findings, considering how findings align with the extant literature and the relevant policy contexts, offering recommendations for practice and for future researchers.

CHAPTER 5 DISCUSSION

Introduction

The results of the study were presented and analyzed in Chapter 4. This chapter contains a summary of the investigation, a discussion on the implications for practice, and recommendations for future researchers. The chapter contains three sections: (a) discussion of the findings and alignment with extant literature, (b) recommendations for practice, and (c) recommendations for further research.

Discussion of the Findings and Alignment with Extant Literature

The study was designed to investigate student achievement in Florida charter schools to determine if there were statistically significant differences attributable to the school's management model (for-profit or not-for-profit). To more fully specify the model and strengthen the study, moderator variables of school cohort size and poverty, and covariates of minority percentage, disability percentage, and percentage of English language learners were included. The instrument used was the 2016 FSA in fourth-, eighth-, and 10th-grade ELA, and fourth- and eighth-grade mathematics. The population consisted of all 530 charter schools that reported 2016 FSA results.

Main Effects

The primary purpose of this study was to compare differences in student achievement in Florida charter schools based on the school's management model – either for-profit or not-for-profit. In only three instances did the management model yield statistically significant differences in student achievement. Tenth-grade ELA with poverty as the moderator variable was statistically significant with not-for-profit schools

(mean scale score of 350.25) performing better than for-profit schools (mean scale score of 340.94). Eighth-grade mathematics with both school cohort size and poverty as the moderator variables were significant with not-for-profit schools (mean scale score 338.19), performing better than for-profit schools (mean scale score 335.14).

Generally, these findings concur with the research reviewed in Chapter 2. Sass (2006) who studied charter schools in Florida, found that the charter school management model did not show any impact on student achievement. He wrote, “Management structure appears to have no impact on student achievement in charter schools; charters managed by for-profit firms perform the same as those operated by nonprofit entities” (p. 119).

Peterson and Chingos (2009), who investigated student achievement in the Philadelphia Public Schools, found no significant differences in reading but did find a significant difference in mathematics. That finding is similar to the finding in this research in eighth-grade mathematics. The major difference between Peterson and Chingos’ (2009) findings and the present study was that their study was limited to the lowest 46 performing elementary and middle schools in Philadelphia between 2002 and 2008, but in this study, the researcher investigated all 530 charter schools in Florida using spring 2016 FSA test results. Additionally, Peterson and Chingos (2009) cautioned against making generalizations from their findings because the not-for-profit EMOs in Philadelphia “seem to have been selected as much for their strong political base as for any history of effectiveness at delivering educational services” (pp. 27-28).

Garcia et al. (2009) in their Arizona charter school study, also concluded that there was no difference in student achievement based on management alone. Only by

analyzing subtests were Garcia et al. (2009) able to find a small, statistically-positive effect in vocabulary while also finding a small, statistically-negative effect in reading comprehension. They attributed those differences to techniques for-profit EMOs use to enforce a highly-structured curriculum that favors basic skills over critical thinking skills.

Although not statistically significant, differences identified in the current study showed that not-for-profit charter schools had higher mean scale scores in fourth-grade mathematics (311.11 as compared with 310.72) and eighth-grade ELA (341.42 as compared with 340.84), as well as with the statistically significant scores in eighth-grade mathematics (338.19 as compared with 335.14) and 10th-grade ELA (350.25 as compared with 340.94). Only in fourth-grade mathematics (313.16 as compared with 313.42) did for-profit charter schools have higher mean scale scores on the 2016 FSA.

Accordingly, there did not appear to be an overarching statistical difference between for-profit and not-for-profit charter schools in Florida based on the 2016 administration of the FSA.

Interaction Effects

Interaction effects occur “when one independent variable has a significant effect on the dependent variable, but only under certain levels or conditions of the other independent variable” (Steinberg, 2011, p. 339). In this study, interaction effects could occur between poverty and the management model or between the school cohort size and the management model. As depicted in Figures 1 and 2, interaction effects occurred only for 10th-grade ELA with both school cohort size and poverty.

When the school cohort size was low (1-41 students per grade), for-profit charter schools had higher estimated marginal means (approximately 347.5 as compared to

approximately 342.5) than not-for-profit charter schools. When the school cohort size was medium (42-90 students per grade), not-for-profit schools had higher estimated marginal means (approximately 350.0 as compared to 337.5) than for-profit schools. As the school cohort size rose to high (91-445 students per grade), the not-for-profit charter schools had higher estimated marginal means (approximately 350.5 as compared to approximately 345.0) than for for-profit schools.

When poverty was low (0-25.9% students on free or reduced price lunch), not-for-profit charter schools had higher estimated marginal means (approximately 353 as compared to approximately 338) than for-profit charter schools. When poverty was medium (26.0-62.9% students on free or reduced price lunch), not-for-profit schools had higher estimated marginal means (approximately 348 as compared to 344) than for-profit schools. As poverty rose to high (63.0-100% students on free or reduced price lunch), the for-profit charter schools had higher estimated marginal means (approximately 343 as compared to approximately 342) than not-for-profit schools.

The review of literature related to charter school management models and student achievement yielded no information on the influence of school cohort size or poverty on student achievement measures. However, the literature comparing charter schools and traditional public schools shed some light on the interaction effects found in this study.

In reviewing the results of poverty, the researcher found higher marginal mean scores with for-profit schools when poverty was high. Thus, the for-profit schools outperformed the not-for-profit schools when they served populations where there was greater poverty. These results are similar to the results found by the Center for Research

on Education Outcomes (2013); Clark et al. (2015); DiCarlo (2011); Finn et al. (2016); and Office of Program Policy Analysis and Government Accountability (2005b).

The review of literature using smaller school class size (school cohort size) as a factor also revealed that when charter schools had smaller classes, they outperformed traditional public schools (Hassell et al., 2006). This comports with the findings in the present study regarding student achievement and school cohort size.

Covariates

This study included three covariates: (a) minority—defined as the percentage of students who were not White, (b) disability—defined as the percentage of students with disabilities, and (c) ELL—defined as percentage of students who were English Language Learners. Analysis of the data revealed that minority status had a statistically significant influence and accounted for some of the variance in each of the 10 subject and moderator variable combinations except for eighth-grade mathematics with poverty. Disability status was statistically significant and accounted for some of the variance in each of the 10 subject and moderator variable combinations. ELL had a statistically significant influence and accounted for some of the variance only in eighth-grade ELA with school cohort size as the moderator variable and in 10th-grade ELA with both school cohort size and poverty as the moderator variables.

Minority status influencing student achievement comports with prior research (Egalite & Kisida, 2016; Johnson et al., 2016; Lee & Loeb, 2000; Murphy, 2010; White et al., 2016). Students with disabilities have been found to affect charter school achievement negatively (Sass, 2016). ELL significance appears to be reasonable, as

students for whom English is a second language can be expected to have difficulty with ELA examinations.

Implications for Practice

As expressed in Chapter 2 of this study, when charter schools were proposed, their advocates had many dreams for the influence they would exert on the educational marketplace, including traditional public schools. Among the expectations for charters was the development of specialized schools to offer curricula not available or not stressed in the traditional school, empowering parents and educators to operate the school, creating more options for students, encouraging traditional public schools to meet the higher educational accomplishments of charter schools, developing innovative approaches to education, and overall, providing for better student achievement results (Crew & Anderson, 2003; Finn et al., 2000, 2016). Those promises, for the most part, have not been fulfilled.

The stated purpose of this study was to help guide legislators and others in strengthening the charter school program to assure that public funds for education are spent on student educational needs and not on the profitability of unsuccessful for-profit EMOs. The results confirmed that in Florida, there was little to no benefit to students from for-profit charter schools. The extant literature documents mixed results between charter schools and traditional public schools (Bettinger, 2005; Betts & Tang, 2011; Bifulco & Ladd, 2004; Center for Research on Educational Outcomes, 2013; Clark, 2015; Crew & Anderson, 2003; DiCarlo, 2011; May, 2006; Hassel, Terrell, & Kowal, 2006; Miron & Nelson, 2001; Office of Program Policy Analysis and Government Accountability, 2005b; Sass, 2006; Silverman, 2012; Zimmer, et al., 2012). Many for-

profit charter schools were no better than traditional public schools and, in some instances, were worse—10th-grade ELA with poverty as the moderator variable, and eighth-grade mathematics with both school cohort size and poverty as the moderator variables—than the not-for-profit charter schools.

These results, therefore, raise several practice-related issues. First, if there is no difference in student achievement between for-profit charter schools, not-for-profit charter schools, and traditional public schools, perhaps for-profit entities should not be permitted to take monies from the public schools in order to enrich their investors at the expense of the nation's school children without delivering better results.

Second, some for-profit entities provide similar results to traditional public schools while using some of their per-pupil income to provide profits to their investors. Perhaps, public school officials should learn from these for-profit charter schools how public schools could reduce their traditional expenses or, in the alternative, improve teaching methods in the traditional public schools.

Lastly, some charter schools do outperform their traditional public school peers. There may be strategies or methods that might be replicated in other schools to improve student performance, and those should be shared with the entire education community. If there are no benefits that are derived from siphoning much needed funding from traditional public schools to charter schools, perhaps the charter school program should be reviewed in its entirety to find additional ways to enable parental choice and involvement in the traditional public school system.

Recommendations for Further Research

This study provides a basis for annual, or at the very least, biennial research to compare the effects of charter school management models on student achievement. Such information would yield data, on the progress being made by charter schools, based on their management models, to fulfill their promise of providing a superior education . It would also enable policy makers to monitor the effectiveness of for-profit charter schools as compared to not-for-profit charter schools, and potentially, to investigate the effectiveness of charter schools generally, in Florida.

Investigating more thoroughly the covariate effects used in this study is another potential area of research. Although the researcher in the current study did not analyze the effects of minorities, disabilities, and ELL on the outcomes, other than to acknowledge their accounting for some of the variance, knowing the direction of their influence and how they affect student achievement would yield potentially useful information.

Research into how charter schools actually compare with Florida's traditional public schools would better inform decision makers as to the true effects of charter schools on the educational scene in the state. Should those results show little or a negative difference between charter and traditional schools, serious debate would need to occur to determine the future of charter schools in Florida.

Finally, some charter schools perform exceptionally well while others fare poorly. A study of high-achievement charter school achievement to determine what the exceptional schools do differently than the lower-performing charter schools would help shed light on ways to raise the educational performance of all charter schools.

Summary

In this study, using a two-way ANCOVA, the researcher found limited statistically significant differences in student achievement on fourth-, eighth-, and 10th-grade ELA and in fourth- and eighth-grade mathematics as measured by the 2016 administration of the FSA. Only 10th-grade ELA with poverty and eighth-grade mathematics with poverty and school cohort size had statistically significant differences favoring not-for-profit charter schools. Interaction effects were found to be statistically significant for 10th-grade ELA with both school cohort size and poverty as the moderator variables. When the school cohort size was low or poverty was high, for-profit charter schools outperformed not-for-profit charter schools. In every other case, not-for-profit charter schools outperformed their for-profit peers. Finally, the covariates of percentage of minority students, percentage of disabled students, and percentage of ELLs explained some of the variation in the differences in student achievement.

Recommendations for practice including more stringent review of the role of for-profit charter schools as well as increased exchange of best practices between charter schools and traditional public schools were made. Recommendations for future research included more study of the direction of the covariates used as well as regular updating of this research. The research found, as did prior researchers that, in a general sense, there was no difference in student achievement between management models of charter schools.

APPENDIX
IRB APPROVAL LETTER



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901, 407-882-2012 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

NOT HUMAN RESEARCH DETERMINATION

From : **UCF Institutional Review Board #1
FWA0000351, IRB00001138**
To : **Maurice S. Kaprow**
Date : **June 01, 2017**

Dear Researcher:

On 06/01/2017 the IRB determined that the following proposed activity is not human research as defined by DHHS regulations at 45 CFR 46 or FDA regulations at 21 CFR 50/56:

Type of Review: Not Human Research Determination
Project Title: A COMPARISON OF STUDENT ACHIEVEMENT IN
FLORIDA CHARTER SCHOOLS WITH NOT-FOR-
PROFIT AND FOR-PROFIT MANAGEMENT MODELS
Investigator: Maurice S. Kaprow
IRB ID: SBE-17-13226
Funding Agency:
Grant Title:
Research ID: N/A

University of Central Florida IRB review and approval is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are to be made and there are questions about whether these activities are research involving human subjects, please contact the IRB office to discuss the proposed changes.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Gillian Amy Mary Morien on 06/01/2017 03:03:54 PM EDT

IRB Coordinator

LIST OF REFERENCES

- Baker, B., & Miron, G. (2015). *The business of charter schooling: Understanding the policies that charter operators use for financial benefit*. Retrieved from National Education Policy Center website: <http://nepc.colorado.edu/publication/charter-revenue>
- Berends, M. (2004). In the wake of A Nation at Risk: New American schools' private sector school reform initiative. *Peabody Journal of Education* 79(1), 130-163.
- Bettinger, E. P. (2005). The effect of charter schools on charter students and public schools. *Economics of Education Review* 24, 133-147.
- Betts, J. R., & Tang, Y. E. (2011). *The effect of charter schools on student achievement: A meta-analysis of the literature*. National Charter School Research Project. Retrieved from <http://files.eric.ed.gov/fulltext/ED526353.pdf>
- Bickel, R. (2007). *Multilevel analysis for applied research: It's just regression! Methodology in the social sciences*. New York, NY: Guilford.
- Bifulco, R., & Ladd, H. F. (2004). *The impacts of charter schools on student achievement: Evidence from North Carolina* (The Terry Sanford Institute of Public Policy: Duke, Working Paper Series SAN04-01). Retrieved from <http://files.eric.ed.gov/fulltext/ED493385.pdf>
- Black's Law Dictionary. (2017). *What is ULTRA VIRES?* Retrieved from <http://thelawdictionary.org/ultra-vires/>
- Budde, R., (1988). *Education by charter*. Andover, MA: Regional Laboratory for the Northeast and Regional Islands. Retrieved from <http://eric.ed.gov/?id=ED295298>
- Carnegie Foundation for the Advancement of Teaching. (2017). *Marshall (Mike) Smith: Senior fellow*. [Online web posting]. Retrieved from <https://www.carnegiefoundation.org/who-we-are/staff-directory/mike-smith/>
- Carroll, J. B. (1963). A model of school learning. *Teachers College Record* 64(8), 722-733.
- Catalanello, R. (2003, October 17). State officials vow to tighten leash on charter schools. *St. Petersburg Times*. p. 4B.
- Center for Research on Education Outcomes. (2013). *National charter school study: Executive summary*. Retrieved from <http://credo.stanford.edu/documents/NCSS%202013%20Executive%Summary.pdf>

- Chion-Kennedy, L. (1998, November 17). School system to pitch charter school idea. *St. Petersburg Times*, p. 3B.
- Chubb, T. E., & Moe, T. M. (1990). *Politics, markets, and America's schools*. Washington, DC: Brookings.
- Clark, M. A., Gleason, P. M., Tuttle, C. C., & Silverberg, M. K. (2015). Do charter schools improve student achievement? *Educational Evaluation and Policy Analysis*, 37(4), 419-436.
- Coleman, J. (1966). *Equality of educational opportunity: Summary report*. Washington, DC: U.S. Department of Health, Education, and Welfare.
- Congressional Digest. (1997). A framework for reform: Goals 2000: Educate America Act. *Congressional Digest*, (11), 259-260. Retrieved from <http://eds.b.ebscohost.com.ezproxy.net.ucf.edu/eds/pdfviewer/pdfviewer?vid=5&sid=5a26d8aa-fa66-4145-beaf-399f70a63759%40sessionmgr120>
- Conn, K. (2002). For-profit school management corporations: Serving the wrong master. *Journal of Law & Education*, 31, 129-148.
- Crew, R. E., Jr., & Anderson, M. R. (2003). Accountability and performance in charter schools in Florida: A theory-based evaluation. *American Journal of Evaluation*, 24, 189-212.
- DiCarlo, M. (2011). *The evidence on charter schools and test scores*. The Albert Shanker Institute. Retrieved from <http://files.eric.ed.gov/fulltext/ED528633.pdf>
- Editorial Projects in Education Research Center. (2011, September 19). Issues A-Z: No Child Left Behind. *Education Week*. Retrieved from <http://www.edweek.org/ew/issues/no-child-left-behind/>
- Egalite, A. J., & Kisida, B. (2016). School size and student achievement: A longitudinal analysis. *School Effectiveness and School Improvement* 27(3), 406-417.
- Every Student Succeeds Act of 2015*. Retrieved from <https://www.govtrack.us/congress/bills/114/s1177/text>
- Fabricant, M., & Fine, M. (2012). *Charter schools and the corporate makeover of public education*. New York, NY: Teachers College Press.
- Farrell, C., Wohlstetter, P., & Smith, J. (2012). Charter management organizations: An emerging approach to scaling up what works. *Educational Policy* 26(4), 499-532.
- Finn, C. E. Jr., Manno, B. V., & Vanourek, G. (2000). *Charter schools in action: Renewing public education*. Princeton, NJ: University Press

- Finn, C. E. Jr. (2008) *Troublemaker: A personal history of reform*. Princeton, NJ: University Press.
- Finn, C. E. Jr., Manno, B. V., & Wright, B.L. (2016). *Charter schools at the crossroads: Predicaments, paradoxes, possibilities*. Cambridge, MA: Harvard Education Press.
- Florida Department of Education. (2016a). *Florida Standards Assessment 2015-16: Volume 6 Score Interpretation Guide*. Tallahassee, FL: Author. Retrieved from http://fsassessments.org/wp-content/uploads/2016/04/V6_FSA_2015-16TechRpt_508.pdf
- Florida Department of Education (2016b). *Florida Standards Assessment 2015-16: Volume 4 Evidence of Reliability and Validity*. Tallahassee, FL: Author. Retrieved from http://fsassessments.org/wp-content/uploads/2016/04/V4_FSA_2015-16TechRpt_508_FINAL.pdf
- Florida Department of Education. (2016c). *School public accountability reports 2015-2016*. Tallahassee, FL: Author. Retrieved from <https://edstats.fldoe.org/SASWebReportStudio/gotoReportSection.do?sectionNumber=3>
- Florida Department of Education. (2016d). *Charter School Directory*. Retrieved from <http://app4.fldoe.org/CSA/PostToWeb/ManageSearch.aspx>
- Florida Department of Education (2016e). *Florida Standards Assessment 2015-16: Volume 2 Test Development*. Tallahassee, FL: Author. Retrieved from <http://www.fldoe.org/core/fileparse.php/5663/urlt/V2FSA1516TechRpt.pdf>
- Florida Department of Education (2016f). *Understanding Florida Standards Assessment Reports 2016*. Tallahassee, FL: Author. Retrieved from <http://fldoe.org/core/fileparse.php/7490/urlt/UnderstandFSARreport16.pdf>
- Florida Department of Education. (2017a). *2016-2017 School Accountability Reports: District Grades*. Retrieved from <http://schoolgrades.fldoe.org/>
- Florida Department of Education. (2017b). *K-12 student assessment*. Retrieved from <http://www.fldoe.org/accountability/assessments/k-12-student-assessment>
- Florida State University. (2017a). *About CPALMS*. Retrieved from http://www.cpalms.org/CPALMS/about_us.aspx
- Florida State University. (2017b). *Browse and search standards*. Retrieved from <http://www.cpalms.org/Public/search/Standard>

- Florida Statutes*. (2015). Retrieved from <http://www.leg.state.fl.us/Statutes/index.cfm?Mode=View%20Statutes&Submenu=1&Tab=statutes&CFID=52548846&CFTOKEN=5c11995884813b9d-04A6A49E-EED6-9069-F1B2713B7C30024C>
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to design and evaluate research in education (9th ed.)*. New York, NY:McGraw-Hill.
- Garcia, D. R., Barber, R., & Molnar, A. (2009). Profiting from public education: Education management organizations and student achievement. *Teachers College Record*, 111(5), 1352-1379.
- Giersch, J. (2014). Aiming for giants: Charter school legislation and the power of teacher unions. *Education and Urban Society*, 46(6), 653-671.
- Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (2001). *Disruption versus tiebout improvement: The costs and benefits of switching schools*. National Bureau of Economic Research (Working Paper 8479). Retrieved from <http://www.nber.org.ezproxy.net.ucf.edu/papers/w8479.pdf>
- Hassel, B. C., Terrell, M. G., & Kowal, J. (2006). *Florida charter schools: Hot and humid with passing storms*. Education Sector Reports. Retrieved from <http://www.issuelab.org/resources/543/543.pdf>
- Heaggans, R. C. (2006). Unpacking charter schools: A knapsack filled with a few broken promises. *Education* 126(3), 431-436. Retrieved from <http://eds.a.ebscohost.com.ezproxy.net.ucf.edu/eds/pdfviewer/pdfviewer?vid=1&sid=62ac1ceb-187d-4856-bf76-703a97e3205b%40sessionmgr4007>
- Hiaasen, S., & McGrory, K. (2011, September 19). Florida charter schools: big money, little oversight. *The Miami Herald*. Retrieved from <http://www.miamiherald.com/news/special-reports/cahshing-in-on-kids/article1939199.html>
- Husband, T., & Hunt, C. (2015). A review of the empirical literature on No Child Left Behind from 2001 to 2010. *Planning and Changing*, 46(1/2), 212-254. Retrieved from <http://eds.a.ebscohost.com.ezproxy.net.ucf.edu/eds/pdfviewer/pdfviewer?vid=9&sid=43c5f47c-cdbb-4ef8-9755-2734c4ff459a%40sessionmgr4006&hid=4110>
- Imhotep-Nguzo Saba Charter School v. Department of Education*, 947 So.2d 1279 (4th DCA, Fla. 2007). Retrieved from http://www.leagle.com/decision/20072226947So2d1279_11544/IMHOTEP-NGUZO%20SABA%20CHART.%20v.%20DEPT.%20OF%20EDUC

- Jefferson County, Florida. (2017). *About Jefferson County*. Retrieved from <http://www.jeffersoncountyfl.gov/p/about-jefferson>
- Jencks, C. (1966). Is the public school obsolete? *The Public Interest*, 2 (Winter), 18-27.
- Johnson, J., Godwyll, F., & Shope, S. (2016). The influence of grade span on student achievement in Florida: A quantitative investigation. *International Journal of Educational Reform*, 25(4), 384-399.
- Joint Legislative Management Committee. (1996). *General acts, resolutions and memorials adopted by the fourteenth legislature of Florida under the constitution revised in 1968 during the regular session, March 5, 1966, through May 4, 1966, Vol.1 Part 1*, pp. 461-474. Retrieved from <http://edocs.dlis.state.fl.us/fldocs/leg/actsflorida/1996/1996v1pt1.pdf>
- Kahlenberg, R. D., & Potter, H. (2015). Restoring Shanker's vision for charter schools. *American Educator*, 38(4), 4-13. Retrieved from http://www.aft.org/sites/default/files/ae_winter2014.pdf
- Kelley, T. A. III. (2015). North Carolina charter schools' (Non-?) compliance with state and federal nonprofit law. *North Carolina Law Review* 96, 1757-1824.
- KIPP Foundation. (n.d.). *How is KIPP structured*. Retrieved from <http://www.kipp.org/schools/structure/>
- Kolderie, T., (2005). Ray Budde and the origins of the charter concept. *Education Evolving*. Retrieved from <http://www.educationevolving.org/pdf/Ray-Budde-Origins-Of-Chartering.pdf>
- Laws of Florida. (2002). *Chapter 2002-387; Senate bill number 20-E*. Retrieved from <http://laws.flrules.org/2002/387>
- Ledger staff. (1997, March, 25). 18 charter schools to open in fall; three of the new charter schools to open in Polk. *Lakeland Ledger*, p. B3.
- Lee, V. E., & Loeb, S. (2000). School size in Chicago elementary schools: Effects on teachers' attitudes and students' achievement. *American Educational Research Journal* 37(1), 3-31
- Legg, S. (2017, June 5). Charter takeover of Jefferson County schools: Why? *League of Women Voters – Education Issues*. Retrieved from <http://www.wveducation.com/charter-takeover-of-jefferson-county-schools-why/>
- Levine, M., & Levine, A. (2012). 'Left back' and the age-grade system: Problem creation through problem solution. *American Journal of Orthopsychiatry*, 82(4), 455-462.

- Liu, E., (2015). Solving the puzzle of charter schools: A new framework for understanding and improving charter school legislation and performance. *Columbia Business Law Review* (2015) 273-347. Retrieved from www.lexisnexis.com/hottopic/academic.
- Lockwood, A. T. (2004). *Charter schools decade*. Lanham, MD: Scarecrow.
- López, F. (2014). *Review of a meta-analysis of the literature on the effect of charter schools on student achievement*. National Education Policy Center. Retrieved from <http://nepc.colorado.edu/tjinktank/review-meta-analysis-effect-charter>
- Loveless, T. (2003). Charter school achievement and accountability. In P. E. Peterson & M. R. West (Eds.), *No Child Left Behind: The politics and practice of school accountability* (pp. 177-196). Washington, DC: Brookings.
- MacGillis, A. (2015, January 26). Testing time: Jeb Bush's educational experiment. *New Yorker Magazine*. Retrieved from <http://www.newyorker.com/magazine/2015/01/26/testing-time>
- Martin, P. C. (2015). Contradictory reforms: When NCLB undermines charter school innovation. *Current Issues in Education*, 18(1), 1-12.
- May, J. J. (2006). The charter school allure: Can traditional schools measure up? *Education and Urban Society*, 39(1), 19-45.
- Minnesota Department of Education. (2017). *Charter Schools*. Retrieved from <http://education.state.mn.us/MDE/dse/chart/>
- Miron, G., & Nelson, C. (2001). *Student academic achievement in charter schools: What we know and why we know so little*. (Occasional Paper No. 41). Columbia University, National Center for the Study of Privatization in Education. Retrieved from <https://login.ezproxy.net.ucf.edu/login?auth=shibb&url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED471981&site=ehost-live>
- Molnar, A. (2001). Calculating the benefits and costs of for-profit public education. *Education Policy Analysis Archives*, 9(15), 1-17. Retrieved from <http://epaa.asu.edu/ojs/article/view/344/470>
- Murphy, J., (2010). *The educator's handbook for understanding and closing achievement gaps: Bringing achievement gaps into focus*. Thousand Oaks, CA: Corwin Press.
- Nathan, J. (1996a). Possibilities, problems, and progress: Early lessons from the charter movement. *Phi Delta Kappan*, 78:1, 18-23.

- Nathan, J. (1996b). *Charter schools: Creating hope and opportunity for American education*. San Francisco, CA: Jossey-Bass.
- National Alliance for Public Charter Schools. (2016). *The health of the public charter school movement: A state-by-state analysis*. (2ed.). Retrieved from http://www.publiccharters.org/wp-content/uploads/2016/03/032316-Health-of-the-Movement_13_final.pdf?x87663
- National Alliance for Public Charter Schools. (2017). *Charter School Data Dashboard*. Retrieved from <http://dashboard2.publiccharters.org/National/>
- National Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. Washington, DC: U. S. Government Printing Office.
- New Schools Venture Fund. (2017). *Our history*. Retrieved from <http://newschools.org/about-us/our-history/>
- Nichols, S. L., Glass, G. V., & Berliner, D. C. (2012). High stakes testing and student achievement: Updated analysis with NAEP data. *Education Policy Analysis Archives*, 20, 20, 1-30. Retrieved from <http://eds.b.ebscohost.com.ezproxy.net.ucf.edu/eds/pdfviewer/pdfviewer?vid=3&sid=088c7b12-7f75-4522-a1a1-0a5f4c78f250%40sessionmgr101>
- No Child Left Behind Act of 2001*, 20 U.S.C. § 6301*et seq.*(2001). Retrieved from <https://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf>
- Oberfield, Z. W. (2016). A bargain half fulfilled: Teacher autonomy and accountability in traditional public schools and public charter schools. *American Educational Research Journal* 53(2), 296-323.
- Office of Program Policy Analysis and Government Accountability [OPPAGA]. (2005a). *Charter school application requirements are reasonable; Financial management problematic* (Report number 05-11). Retrieved from <http://www.oppaga.state.fl.us/reports/0511rpt.pdf>
- Office of Program Policy Analysis and Government Accountability [OPPAGA]. (2005b). *Charter school performance comparable to other public schools; stronger accountability needed* (Report number 05-21). Retrieved from <http://www.oppaga.state.fl.us/reports/0521rpt.pdf>
- Office of Program Policy Analysis and Government Accountability [OPPAGA]. (2008). *Steps taken to improve charter school financial management and performance accountability; additional action needed* (Report number 0804). Retrieved from <http://www.oppaga.state.fl.us/reports/0804rpt.pdf>

- Paino, M., Renzulli, L. A., Boylan, R. L., & Bradley, C. L. (2014). For grades or money? Charter school failure in North Carolina. *Educational Administration Quarterly*, 50(3), 500-536.
- Payne, C., & Knowles, T. (2009). Promise and peril: Charter schools, urban school reform, and the Obama administration. *Harvard Educational Review*, 79(2), 227-239. Retrieved from <http://hepgjournals.org.ezproxy.net.ucf.edu/doi/pdf/10.17763/haer.79.2.t5652153x1612h47>
- Perkins-Gough, D. (1997). Charter schools: Whom do they serve, and how well? *ERS Spectrum* 53(3), 3-9.
- Peterson, P. E., & Chingos, M. M. (2009). *Impact of for-profit and nonprofit management on student achievement: The Philadelphia intervention, 2002-2008*. (PEPG 09-02). Retrieved from <http://files.eric.ed.gov/fulltext/ED504449.pdf>
- Quinn, R., Oelberger, C. R., & Meyerson, D. (2016). Getting- to scale: Opportunities, and resources in the early diffusion of the charter management organization, 1999-2006. *Teachers College Record*, 118(090303), 1-44.
- Rado, D. (1995, May 7). In the end, education reform didn't pass. *St. Petersburg Times*, p. 1B.
- Rado, D. (1995, May 12). Agency says charter schools still possible. *St. Petersburg Times*, p. 5B.
- Rado, D. (1996, May 5). Legislature chalks up school bills. *St. Petersburg Times*, p. 1B.
- Rado, D. (1998, March 18). Charter schools may expand. *St. Petersburg Times*, p. 1B.
- Radu, L. (2012). The Goals 2000 educate America act and the national standards in education. *Bulletin of the Transilvania University of Braşov, Series VII*, 5(54) No. 2, 21-24.
- Ravitch, D. (2008). A nation still at risk. *Hoover Digest*, 2008(4), n.p. Retrieved from <http://www.hoover.org/research/nation-still-risk>.
- Revamping of Education Governance in Florida Reveals a New Political Order. (2002). *The Chronicle of Higher Education*, (36). Retrieved from <http://eds.b.ebscohost.com.ezproxy.net.ucf.edu/eds/detail/detail?vid=9&sid=7211b6fe-8d29-4047-bf04-0cd8853dfb6b%40sessionmgr104&bdata=JnNpdGU9ZWRzLWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#AN=edsgcl.146969031&db=edsgao>

- Roch, C. H., & Sai, N. (2015). Nonprofit, for-profit, or stand-alone? How management organizations influence the working conditions in charter schools. *Social Science Quarterly* 96(5), 1380-1395).
- Rollwagen, J., & McLellan, D. (1988). *Citizens League report: Chartered schools = choices for educators + quality for all students*. Retrieved from <https://citizensleague.org/wp-content/uploads/2013/05/424.Report.Chartered-Schools-Choices-for-Education-Quality-for-All-Students1.pdf>
- Sass, T. R. (2006). Charter schools and student achievement in Florida. *Education Finance and Policy*, 1(1), 91-122.
- School Board of Hillsborough County v. Tampa School Development Corp* 113 So.3d 919 (2d DCA Fla. 2013). Retrieved from <http://www.leagle.com/decision/In%20FLCO%2020130125196/SCHOOL%20BD.%20OF%20HILLSBOROUGH%20v.%20TAMPA%20SCHOOL>
- School Board of Volusia County v. Academies of Excellence, Inc.* 974 So. 2d 1186 (5th DCA Fla. 2008). Retrieved from http://www.leagle.com/decision/20082160974So2d1186_12105/SCHOOL%20BD.%20OF%20VOLUSIA%20COUNTY%20v.%20ACADEMIES
- Schroeder, J. (2004). *Ripples of innovation: Charter schooling in Minnesota, the nation's first charter school state*. Washington, DC: Progressive Policy Institute. Retrieved from <http://files.eric.ed.gov/fulltext/ED491210.pdf>
- Silverman, R. M. (2012). Making waves or treading water? An analysis of charter schools in New York State. *Urban Education*, 48(2), 257-288.
- St. Petersburg Times*. (2002, March 31). Rewriting the code, p. 2D.
- Steinberg, W. J. (2011). *Statistics alive!* (2nd. ed.). Los Angeles, CA: Sage.
- Stewart, P. (2016, August 16). *[Letter to Al Cooksey]*. Florida Department of Education. Retrieved from <https://drive.google.com/file/d/0B1cgb13bAepwN3U1MW8wVE55b00/view>
- Stillings, C. (2005). Charter schools and No Child -Left Behind: Sacrificing autonomy for accountability. *Journal of Education*, 186(2), 51-70. Retrieved from <http://eds.a.ebscohost.com.ezproxy.net.ucf.edu/eds/pdfviewer/pdfviewer?vid=4&sid=0f99f150-9bf3-4c3f-98e0-8668293053f7%40sessionmgr4007&hid=4110>
- Tabachnick, B. G., & Fidell, L. S. (1989). *Using multivariate statistics (2nd ed.)*. New York: Harper & Row.

- Tan, X., & Michel, R. (2011, September). Why do standardized testing programs report scale scores? Why not just the raw or percent correct scores? *R & D Connections* 16. Retrieved from http://www.ets.org/Media/Research/pdf/RD_Connections16.pdf
- Toson, A. L.-M. (2011). Show me the money: The benefits of for-profit charter schools (aka EMOs). *Education and Urban Society*, 45(6), 658-667.
- U.S. Department of Education. (1995). *The improving America's schools act of 1994*. Washington, DC: Author. Retrieved from <http://files.eric.ed.gov/fulltext/ED399649.pdf>
- U.S. Department of Education. (2002). *The no child left behind act of 2001* [Executive Summary]. Retrieved from <https://www2.ed.gov/nclb/overview/intro/execsumm.pdf>
- U.S. Department of Education. (n.d.). *Marshall S. Smith* [Online web posting]. Retrieved from <https://www2.ed.gov/offices/OUS/smith.html>
- Vinovskis, M. A. (2009). *From A Nation at Risk to No Child Left Behind: National education goals and the creation of federal education policy*. New York, NY: Teachers College Press.
- Wallsten, P. (1998, May 23). Chiles bends on charter schools. *St. Petersburg Times*, p. 1B.
- White, G. W., Stepney, C. T., Hatchimonji, D. R., Mocerri, D. C., Linsky, A. V., Reyes-Portillo, J. A., Ekias, M. J. (2016). The increasing impact of socioeconomic and race on standardized academic test scores across elementary, middle, and high school. *American Journal of Orthopsychiatry* 86(1) 10-23.
- Wildt, A. R., & Ahtola, O. (1978). *Quantitative applications in the social sciences: Analysis of covariance*. Thousand Oaks, CA: Sage.
- Wilson, S. F., Levin, H., & Mathews, J. (2005). Realizing the promise of brand-name schools. *Brookings Papers on Educational Policy*, 8, 89-135.
- Wong, K. K. & Langevin, W. E. (2007). Policy expansion of school choice in the American states. *Peabody Journal of Education*, 82:2-3, 440-472.
- Zimmer, R., Gill, B., Booker, K., Lavertu, S., & Witte, J. (2012). Examining charter student achievement effects across seven states. *Economics of Education Review*, 31(2), 213-224.