Florida Not-for-Profit and For-Profit Charter Schools:
Per-pupil Expenditure and Student Achievement

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Abstract

From its inception in 1997 to 2016, the Florida charter school movement expanded from the first charter school in Miami to over 645 charter schools in 46 counties. Hiaasen and McGrory (2011) explained the expansion of the charter school movement was prompted by the deregulation of Florida's charter school accountability and replication practices, which allowed for the profitization of charter school education via the use of management companies.

This study had three purposes: 1) determining if there was a difference in per-pupil-expenditure between the not-for-profit and for-profit charter school models; 2) determining if there was a difference in academic performance, as measured by the FCAT 2.0 reading, math, and science assessments, between the two charter school models; and 3) determining if there was a difference in the relationship between per-pupil expenditure and academic performance between the two charter school models. Independent samples *t* tests, Pearson correlation coefficients, and Fisher's *z* tests were utilized to test the seven hypotheses of this study. Additional analysis to determine difference among the not-for-profit, not-for-profit with a charter management company (CMO), and for-profit charter schools involved one-factor analyses of variance (ANOVAs) and post hoc Tukey's Honestly Significant Difference tests.

The results indicated a statistically significant difference in PPE, with the not-for-profit charter schools spending significantly more money per pupil. Additionally, the findings of the study established mixed academic results, with the not-for-profit charter schools having the highest percentage of students scoring satisfactory or higher in reading and the for-profit charter schools having the highest percentage of students scoring

satisfactory or higher in math and science. The differences in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading and math assessments were not statistically significant, while the difference in the percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment was statistically significant. Additional analyses established statistically significant differences, with the not-for-profit (CMO) charter schools having a significantly lower PPE and the lowest percentage of students scoring satisfactory or higher in reading, math, and science on the FCAT 2.0. Implications for the study include suggested changes to Florida charter school law regarding equity in public charter school per pupil expenditure practices, as well as the need for increased accountability and transparency in public reporting of how charter schools are expending taxpayer dollars and its relationship to student achievement.

Dedication

This paper is dedicated to the following individuals:

To my daughter, Kamryn: If you had not agreed to take a leap of faith and move to Florida, this study and its results would not be possible. Thank you for your bravery, patience, understanding, support, and encouragement. I am so very proud of the talented, brilliant, hard-working, open-minded, and kind young woman you have become. I am constantly amazed and impressed by you. I cannot wait to see how you will change the world. I love you!

To my Dad, family, and friends: I cannot express in words how much your words of encouragement have meant to me during this journey. Thank you for sticking with me.

To Dr. Rogers: This journey, from its foundation to its finale, was not possible without you. Thank you for your respect, support, questions, prompts, comments, and for being the hand that lifted me and urged me forward.

To Mom: Thank you for always being my sounding board, for playing devil's advocate, for teaching me about perseverance, for keeping me grounded, and for always being my rock. I wish you were here to experience this moment with us. This is dedicated to your memory.

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Chapter One

Introduction

As the United States forges further into the early 21st century and out of the Great Recession, two primary approaches are at the forefront of the educational reform movement: school finance reform and school choice reform. According to Fischel (2003), between 1971 and 2003, at least 17 state supreme courts found their states' school finance practices to be unconstitutional due to inequity in the distribution of funds. The majority of cases resulted in reducing per-pupil expenditures differences among districts, increasing legislative control over all funding practices, and reducing reliance on local property taxes (Fischel, 2003). In regards to financial reform, Finn and Petrelli (2009) stated that the current long-term educational-funding outlook is gloomy because school budgets continue to be funded largely by property taxes, "which still reflect housing values from the height of the real estate bubble" (p. 1).

Financial reform in education is not a new phenomenon. In 1991, Strickland affirmed the educational finance system seemed to be and would continue to be "vulnerable to a constitutional challenge" due to inequities in per-pupil expenditures and "a lack of sufficient guaranteed funding to ensure a minimum education for all children, and a failure to apportion funds based on the educational needs of children" (p. 1177). Finn and Petrelli (2009) further added that the current financial reform movement is an "earnest campaign to trim the public sector's fat, [which] would not only turn up many plump candidates to cut, but could actually make our education system more effective" (p. 1).

When the No Child Left Behind Act of 2001 was passed into federal law, it allowed for and promoted public school choice. In their interpretation of the Act, the U.S. Department of Education (2008) stated that parents with a child enrolled in "schools in need of improvement must be given the opportunity to transfer to other public schools in their district, including public charter schools" (p. 1). Grady and Bielick (2010) define the school choice options as having increased since the 1960s to include "inter-district choice plans, intra-district choice plans, charter schools, vouchers to attend private schools," (p. 1) and virtual options. According to the National Alliance for Public Charter Schools (2012), the growth of the charter school movement was evident in the last decade with the addition of 3,334 charter schools in the United States, more than doubling the total number of charter schools to 5.4% of the total education market share. As compiled by the National Alliance for Public Charter Schools (2014) and collected from the Public Charter School Dashboard, this trend continued through the 2013-2014 school year, with 6,440 charter schools in the United States educating over 2.5 million students. The expansion and growth of the charter school movement led us to our current intermingling of these two school reform movements.

According to the University of Florida's Bureau of Economic and Business Research (2012), Florida's population grew 17.6% from 2000 to 2010. Thomas (2006) surmised, "Charter schools have flourished in Florida largely because of the state's rapid population growth" (p. 7). Additionally, Hassel, Terrel, and Kowal (2006) stated that charter schools have "reduced overcrowding in [public] schools and offset the high cost of educational facilities" (p. 13), by absorbing additional student enrollment instead of public schools expanding and constructing new facilities. To advance the expansion of

the Florida charter school movement, the Florida State Senate deregulated many of the state statutes for charter schools, which ultimately reduced financial and academic accountability, as well as provided inequitable funding options for these schools (Hassel et al., 2006). Since 1996, when charter schools were first authorized in Florida, state legislators created a $5 million fund for facilities and established a maximum number of charter schools that could be authorized in each school district (Hassel et al., 2006). In 2011, the Florida Senate passed State Senate Bill 1546 that provided the following additional charter school accommodations: 1) an annual increase of 15% in student enrollment beginning March 2012, 2) a reduction of the allowable district administrative fees from five to two percent for the first 250 students, 3) the permission of any Florida county to open a charter school, and 4) the allowance for automatic 15-year contract renewals versus the traditional five-year contract.

The passage of the State Senate Bill 1546 resulted in a vast expansion of charter schools throughout Florida. Hassel et al. (2006) found that 62 Florida charter schools were closed as of January 2006, which was equivalent to 15% of all the charter schools. Additionally, Hassel et al. (2006) found that "more than a third of the charter schools closures in Florida occurred due to financial mismanagement" (p. 8). This contention was supported by Strauss (2011) who stated there were growing concerns among critics about charter schools, including research that suggested that most charters were no better than traditional public schools and additional concerns regarding charter agency monitoring, as well as concerns about the propriety of for-profit groups operating schools to make money.

Background

The charter school movement, a sub-movement of the school choice movement, began in 1988 when Shanker, president of the American Federation of Teachers, called for public school reform through the establishment of charter schools (Minnesota Legislative Reference Library, 2011). Shortly thereafter in 1991, Minnesota passed the first charter school law, with California being the second state to create and pass a charter school law the next year (Public Broadcasting Service, 2004). Within three years, 19 states had enacted laws that allowed for the formation of charter schools (Public Broadcasting Service, 2004).

In May 1996, the Florida State Legislature passed into law Florida State Statute 1002.33, which allowed for the creation of the state's first five charter schools as part of the Florida's public school system (Florida Department of Education [FLDOE], 2006). The charter school movement quickly expanded throughout the state. The FLDOE (2010) reported that by the 2009-2010 school year "411 [charter schools] operated throughout the state in 43 school districts and at two state universities" (p. 1). According to the FLDOE (2013), during the "2012-13 school year, over 203,000 students [were] enrolled in 579 charter schools in 44 Florida districts" (p. 1). The expansion of the charter school program in Florida continued to grow, as the FLDOE (2014) reported on its website that there were 615 charter schools located throughout the state's 67 counties. The number of Florida charter schools in each county, along with their classification as a not-for-profit, not-for-profit with a charter management

company (CMO), or for-profit with an educational management organization (EMO), is summarized in Table A1 (see Appendix A).

The FLDOE (2015) stated that enrollment in a charter school is voluntary and part of the Florida School Choice Program. The FLDOE (2015) further explained that parents were presented the option and the opportunity to apply and enroll a student into a charter school of their choosing, which has occurred annually in the winter before the school year in which the student would be attending school. Charter schools provided and strictly adhered to a date by which all applications were returned and considered. Additionally, under Senate Bill 30-3, Chapter 2003-391 (2003), by the year 2010, schools across Florida were mandated to reduce class size to 18 students per class in kindergarten through third grades, 22 students per class in fourth through eighth grades, and 25 students per core class in ninth through twelfth grades. If the number of charter school applications exceeded the number of available grade level openings, charter schools conducted a lottery as defined in their charter to select the students eligible to enroll in their respective schools. As defined by Florida State Statute Title 48, Chapter 1002.33 (1996), students "shall be subject to a random lottery" to "achieve a racial, ethnic balance reflective of the community it serves" (Section 10, para. 4 and Section 7, para. b.8).

The expansion of the charter school movement in Florida was in large part due to strong governmental support, which began with former Governor Jeb Bush. As a strong supporter of charter schools, former Governor Bush and T. Willard Fair, Vice Chair of the Florida State Board of Education and CEO of the Urban League of Greater Miami, founded Liberty City Charter School, the first charter school in Florida (Hassel et al., 2006). Under Governor Bush's leadership, the state began to build the legal foundation

of the statutory laws needed to lead the charter school movement in the United States. According to a press release by the National Alliance for Public Charter Schools (NAPCS, 2012), Florida ranked third out of 42 states in strength of charter school laws, which was determined by "measuring quality and accountability, equitable access to funding and facilities, and limited caps on charter school growth" (p. 1). McGrory (2012) explained that Governor Bush and his nonprofit organization, the Foundation for Florida's Future, continued to lobby and support a stream of pro-charter school legislation through the state legislature. McGrory (2012) also stated the Bush-advocated legislation shifted the "financial and competitive advantage away from traditional public schools to private schools and charter schools, which are often managed by for-profit companies" (p. 1). To further advocate for charter schools, the Florida Legislature enacted Senate Bill 1002.331 (2012), *High Performing Charter Schools*, which stated a "high-performing charter school may submit an application pursuant to s. 1002.33(6) in any school district in the state to establish and operate a new charter school that will substantially replicate its educational program" (p. 1). As detailed by Lake, Dusseault, Bowen, Demeritt, and Hill (2010), this allowed Educational Management Organizations (EMOs) to "sweep in and play an important part in the scalability of the charter school movement by enabling the replication of models that work, creating economies of scale, encouraging collaboration between similar schools, and building support structures for schools" (p. 9). The United States Congress and United State Department of Education strongly paralleled this position and strongly advocated for the replication of high-performing charter schools. To accomplish this task, the U.S. government provided financial grants and incentives to entities wishing to replicate high-performing charter

schools. Lake et al. (2011) cited the following programs being used to fund the replication process: All Students Achieving through Reform (All STAR) Act, Empowering Parents Through Quality Charter Schools Act, the Race to the Top, Investing in Innovation Fund, and the Replication and Expansion for High-Quality Charter Schools (National Alliance for Charter Schools, 2010).

The Florida charter school movement, with assistance for the state-approved replication processes and conservative state legislative opposition toward public school systems, continued to swell. With a well-supported push to expand the role of charter schools in Florida's public school system, many critics questioned the effectiveness of charter schools. These questions centered on academic success, equity in accountability, financial viability, and ethical conduct of charter-school management companies.

Florida Statute 1002.33(23) mandated the FLDOE to create an "annual statewide analysis of student achievement in charter schools versus the achievement of comparable students in traditional public schools" (p. iii). In an analysis of the 2011 FLDOE release of the School Accountability Report, Nelson (2012) reported close to 6% of the state's charter schools received an "F" grade, as compared to less than 1% of public elementary and middle schools receiving the same grade. Specifically, 17 of Florida's 2,280 public elementary and middle schools received a failing grade as compared to 15 of the state's 270 charter elementary and middle schools (FLDOE, 2011). Nelson (2012) concluded that charter schools received "failing grades at a rate more than seven times that of public schools." Two years later, the FLDOE (2013) reported that of the state's 518 charter schools, only 359, or 69% of the schools, reported school accountability grades. Of these reporting charter schools, 193 schools (54%) received an A rating, 72 schools (20%)

received a B rating, 53 schools (15%) received a C rating, 23 schools (6%) received a D rating, and 18 schools (5%) received an F rating. In addition to the disproportionate number of failing charter schools, critics of the charter school movement in Florida also complained about the lack of academic accountability of the charter schools and the subsequent impact on school achievement.

To further compound the issue of failing schools, Harrel et al. (2006) deduced that because charter schools served a smaller number of students as compared to public schools and have unique grade configurations, "about forty percent of charter schools were not assigned grades by the state and twelve percent were not subject to Adequate Yearly Progress designations" under NCLB (p. 9). Additionally, McClure and Shanklin (2011) reported that in 2006 "Forty-three percent of charter schools did receive a letter grade [as reported on the annual School Accountability Report]" (p. 1). Critics interpreted this as a means for charter schools to avoid any corrective actions steps typically imposed on low-performing public schools (McClure & Shanklin, 2011).

The financial viability of charter schools across the nation has been in question for years. In Florida, Hassel et al. (2006) reported that charter schools received "an average of 11.4% less funding than public schools and summarized that financial problems were the most consistent and "common reason for charter school closure" (p. 9). Financial problems encountered by charter schools in Florida, and echoed throughout the country, were further compounded by continued deregulation in Florida related to tax loopholes and accountability. As reported in the New York Times (2010), "two-thirds of the charter schools in Chicago could not cover core expenses, such as salaries, facilities, and overhead" (p. 1). Additionally, the New York Times (2010) stated that a third of

Chicago's charter schools "needed private money to fill more than 20 percent of their budgets" (p. 1). According to Hiaasen and McGrory (2011), the majority of charter schools "rent their facilities in churches, shopping centers, or brand-new school buildings erected by real-estate developers," (p. 4) and these properties are "exempt from property taxes," with "many of the highest rents [being] charged by landlords with ties to the management companies running the (charter) schools" (p. 4). Hiaasen and McGrory (2011) added, "Florida's charter school laws, considered among the nation's most charter school friendly, are aimed more at promoting the schools than policing them, leaving school districts with few ways to enforce the rules" (p. 1). Additionally, Hiaasen and McGrory reported "In 2008, a legislative report said the state should adopt stronger monitoring methods to detect struggling schools before they reach the brink of closing. Instead, lawmakers relaxed the rules even more" (p. 1). The relaxing of rules was evidenced as the Florida State Legislature deregulated the fiscal accountability of its state's charter schools in its proposed rule change to 6A-1.0081: *Charter School and Charter Technical Career Center Monthly Financial Statements and Financial Conditions*. As stated in the FLDOE Notice of Proposed Rules (2013), there was a reduction in the required notes and materials to be submitted on a monthly and quarterly basis to the State Department of Education. As stated by the FLDOE (2013), the following notes and materials were no longer mandated: "projected enrollment for the current school year; actual enrollment at time the statement is submitted; a balance sheet with assets, liabilities, and fund balances; and year-to-date comparison of budget versus actual revenues and expenditures" (p. 1).

With the deregulation of the charter school replication and accountability processes in Florida, the number of charter schools expanded greatly. As of February 2014, the FLDOE indicated the state's charter schools had a collective enrollment of 229,428 students. The demographics of Florida's charter school population, according to the School Choice program (2013), were defined as follows: gender was equally divided between males and females and race or ethnicity was represented by 35% White non-Hispanic, 23% Black non-Hispanic, 37% Hispanic, and 5% were considered Other. Additionally, the School Choice program (2013) found that 48% of these students qualified for the free/reduced lunch program. Additionally, 11% of this population qualified for English Language Learner services and 9% qualified for Exceptional Student Education services. These national demographics do not mirror the demographics of the State of Florida, as determined by the U.S. Census. According to the 2010 U.S. Census, Florida had the fourth largest population with 19,317,568 residents. The following racial demographics were determined through the U.S. Census (2010) for Florida: the State was compromised of 57.9% Caucasian, 22.5% Hispanic, 15.2% Black, and 4.4% representing Other. Additionally, the average income in 2010, according to the U.S. Census (2010), was $47,661, with the State having a poverty rate of 13.8%. Gulosino utilized data from the National Center for Education Statistics to determine the geographic context in which charter schools existed. During the 2010-2011 school year, Gulosino (2011) determined that Florida charter schools were comprised of the following typologies: 33% urban, 46% suburban, 3% town, and 18% rural. With the expansion of charter schools through the replication process and a

changing demographic, many charter schools utilized a management format that best allowed for replication and financial ease of the process through economies of scale.

Hassel et al. (2006) described the five general types of charter school management, which include charter schools "operated by independent boards, education management organization run schools (EMO), conversion from district public schools, charter schools in the workplace, and municipality-run charter schools" (p. 12). The National Alliance of Charter Schools (2010) collected information regarding the number of each state's and national Educational Management Organization (EMO) operated charter schools and Charter Management Organization (CMO) run charter schools. An EMO is a for-profit organization, whereas a CMO is a not-for-profit organization that can hire an EMO to assist in back office support and assistance in managing a charter school. Detailed in Table 1 are the management genres utilized in Florida during the 2010-2011 school year.

Table 1

2010-2011 Comparison of Florida and United States Charter School Management Models

Genre	Locale	Number of Schools	% of Overall Students
EMO	Florida	147	32.0
EMO	United States	649	12.3
CMO	Florida	15	3.3
CMO	United States	1,060	20.2

Note. Adapted from *The Health of the Public Charter School Movement: A State-by-State Analysis* by The National Alliance for Public Charter Schools, 2014, p. 48-49.

In comparison, data were collected from the FLDOE (2015) via a public records request. The FLDOE utilized data provided via the Annual Accountability Report that was provided to the District-sponsor and then submitted to the state. The report provided by the FLDOE (2015) detailed the number of charter schools in Florida from 2011-2012 through 2013-2014, along with the number of schools that utilized a management company, and the number of these schools declared as not-for-profit, not-for-profit (CMO), and for-profit (EMO) charter schools during the same period. Detailed in Table 2 are the different models recognized in Florida, not-for-profit, not-for-profit (CMO), and for-profit (EMO) charter schools, from the 2011-2012 through the 2013-2014.

Table 2

Number and Percentage of Florida's Not-for-profit and For-profit Charter Schools and Management Type From 2011-2012 through 2013-2014

	2011-2012	2012-2013	2013-2014
Charter Schools	519	578	623
Public Charter Schools (Not-for-profit)	323	344	347
Charters with Management Companies	196	234	276
Percentage of Not-For-Profit (CMO)	3.2%	3.8%	4.5%
Percentage of For-Profit (EMO)	34.5%	36.7%	39.8%

Note. Adapted from Florida Department of Education Excel Spreadsheets from Public Records Request to the Office of K-12 School Choice Director Adam Emerson, 2015. Copyright 2015 by the Florida Department of Education.

Data from Tables 1 and 2 establishes a picture of disproportionality in regards to the number of Florida's charter schools with EMOs, as compared to national numbers for EMO-managed charter schools. Florida had a higher percentage of for-profit charter

schools as compared to those nationally and continued to expand that number throughout the 2013-2014 school year. Moreover, the data in Table 2 establishes a growing population of charter schools, including increases in both not-for-profit CMOs and for-profit EMOs. The disproportionate and increasing numbers of for-profit charter schools in Florida and questions about the management and the effectiveness of these organizations have led advocates and proponents to question why enrollment numbers keep growing.

Statement of the Problem

Kingsland (as cited by Mead, LiBetti Mitchel, & Rotherham, 2015) stated, "If current trends continue, charter schools will educate 20-40 percent of all U.S. public school students by 2035" (p. 60). Additionally, Dorn (2004) found within the expanding world of charter schools that the State of Florida and the FLDOE do not hold all publicly-aided schools to the same standards, with the existence of different rules for different types of schools, which included public, charter, and voucher schools. The Florida Office of Independent Education and Parental Choice supported this claim when they cited the Florida Auditor General (2008), who declared "the policies and procedures for many charter schools had not been established in writing [or have been] inadequate in their development, [which resulted in] non-compliance with laws, rules, and good business practices" (p. x). Additionally, Senate Bill 1002.331 deregulated the operation of charter schools and allowed for the replication, often by EMOs, of a highly successful charter school anywhere in Florida. As presented in Table 1 from data collected from the National Alliance for Public Charter Schools (2014), Florida, during the 2011-2012 school year, had a disproportionately high percentage of EMO for-profit charter schools

at 32.0%, as compared to the national average of 12.3%. Miron, Urschel, Yat Aguilar, and Dailey (2013) stated that there had been a national increase of 752 for-profit companies between 1995 and 2010, with an increase in enrollment from approximately 1,000 students to over 394,000 students. Additionally, Miron et al. (2013) identified "the average enrollments for for-profit schools were much larger than nonprofit-managed schools' enrollments," with "large-sized for-profit EMOs account for 74.8% of all students enrolled in EMO- managed schools, which has increased from 73.7% in 2009-2010. Medium for-profit EMOs account for 13.5% and small for-profits only account for 11.8% of the total enrollment" (p. iv). As is typical with any for-profit organization whose end result is to create increased profits, EMOs charge a management fee. Miron (2007) estimated charter school management fees to be equal to 10-15% of a school's annual revenue. Problems with charter school management fees continued to grow throughout the country and were addressed regionally by Auditor General Wagner of Pennsylvania (2012) when he stated, "Pennsylvania law is deficient on placing limits on contracts with and fees paid to private management companies, which can result in excessive profit making with public education dollars" (p. 2). As noted by Solochek (2013), Florida was ranked third in the nation during 2011-2012 when it came to the number of for-profit education management run charter schools, with Florida ranking second for the number of students enrolled in EMO charter schools, including virtual and online schools. Miron et al. (2013), in response to the continued growth, stated

> The growth has slowed for for-profits in brick-and-mortar school settings. The growth of [for-profit sector] virtual schools, which is fueled by millions in

> advertising dollars, is astounding because of the sketchy academic results reported by the schools that operate online. (p. 1)

Florida was projected to continue to have increased numbers of EMOs, students, and needed revenue to pay for the subsequent management fees charged by EMOs. Within this growing for-profit environment, there existed a disparity in the management fees being charged by for-profit EMOs. As stated by Coutts (2011), the "government data suggest that schools with for-profit managers have somewhat worse academic results than charters without management companies, and a number of boards have clashed with managers over a lack of transparency in how they are using public funds" (p.1). Lastly, Hiassen and McGrory (2011) found that Florida

> charter schools have become a parallel school system unto themselves, a system controlled largely by for-profit management companies and private landlords — one and the same, in many cases — and rife with insider deals and potential conflicts of interest. In many instances, the educational mission of the school clashed with the profit-making mission of the management company. (p. 1)

With taxpayers' money and the academic achievement of Florida's students at risk, critics and supporters have questioned at what point the need for financial gain of a corporation trumps the academic needs of the student. Consequently, the study investigated the problem of how the varied management fees of the Florida not-for-profit and for-profit charter schools affected the per pupil expenditure in each setting and if there was a relationship to the academic success of the students in each of these settings based on state assessment results in reading, math, and science.

Purpose of the Study

The purpose of this study was multi-faceted. The first purpose of this study was to determine if there was a significant difference in the per-pupil expenditures between the two different models of charter schools in Florida, the not-for-profit and the for-profit charters. The second purpose of this study was to determine if there were significant differences in the academic performance in the content areas of reading, math, and science between not-for-profit and for-profit charter school students, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0). The third purpose of the study was to determine whether there was a difference in the relationships between per-pupil expenditures and academic performance in the content areas of reading, math, and science between the not-for-profit and for-profit charter schools.

Significance of the Study

The significance of the results of this study is vital to public education and the charter school movement, not just in Florida, but nationwide due to the continued expansion of charter schools. As noted by Hassel et al. (2006), there is a growing population of charter schools in Florida that is drawing national attention. They added, "Not all of these initiatives have been well studied. This is especially true of Florida's public charter schools, which have been praised and attacked but not systematically examined" (p. 5). With the state's vast expansion of the charter school population, including both not-for-profit and for-profit schools, Betts and Atkinson (2012) noted that because charter schools have the freedom to experiment, not all of them will perform equally well. At the time of the study, limited research was found that analyzed the success of not-for-profit and for-profit charter schools in relationship to per-pupil

expenditure. With multiple charter schools models, varying management fees assessed to various charter schools, and mixed academic results as compared to public schools, this study could assist in determining whether increased per-pupil expenditure, within the microcosm of Florida charter schools, would result in increased academic performance.

Delimitations

The delimitations included in this study were established to explore the relationship, if any, between the different models of charter school management, per-pupil expenditures, and student achievement in math, reading, and science. Additional management models, including municipality managed charter schools and charter schools in the workplace, as well as all private and public schools were excluded from the study. The second delimitation of the study was the exclusion of special needs focused charter schools, due to the weighted financing system creating disproportionate per-pupil expenditures for these schools. The third delimitation of the study was the selection of one state, Florida. With charter schools existing in the majority of its counties but due to the composition of a largely urban population, this study might not generalize to the remaining forty-nine states in the union. The fourth delimitation of this study is the inclusion of only the reading, math, and science scores. The omission of the scores of the state writing assessment was due to the subjective nature of the scoring and need to maintain objective quantitative data analysis.

Assumptions

Lunenburg and Irby (2008) defined an assumption as an operational postulate, premise, or proposition about the nature, analysis, or interpretation of

data within a study. The following assumptions were made for the purpose of this study.

1. Per Florida State Statute 1008.25, all eligible third through tenth grade students were administered the FCAT.
2. All state assessments were administered with fidelity and in accordance to state requirements.
3. All students put forth their best effort in successfully completing the required portions of the FCAT.
4. All tests were scored utilizing a uniform process, as directed by the FLDOE.
5. All student assessment data were uploaded correctly and accurately to the FLDOE.
6. All FTE data provided to the FLDOE, and subsequently collected and provided by the FLDOE via a public records request, were accurate and in compliance with state law.
7. All management contract data provided by charter schools via a public records request were accurate.
8. All data were exported to an Excel spreadsheet and uploaded to SPSS in a correct and accurate manner.

Research Questions

Introduced in this section are the quantitative research questions used for this study. There were seven research questions, beginning with a very broad question that looked at educational spending in Florida's not-for-profit and for-profit charter schools.

For the purpose of this study, the not-for-profit schools were inclusive of both the not-for-profit model charter schools and not-for-profit (CMO) model charter schools. For the purpose of this study, the not-for-profit model charter schools did not utilize a management company and had no management fees, whereas the not-for-profit (CMO) model charter schools used a management company and had related management fees. The questions then focus on differences between the charter school settings as it relates to academic achievement on state assessment reading, math, and science scores. Lastly, the questions focused on the identification of the extent of the relationship between per-pupil expenditures and academic achievement may exist.

RQ1. To what extent is there a difference in per-pupil expenditures (PPE) between the not-for-profit and for-profit charter schools in Florida?

RQ2. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0 in reading, between the not-for-profit and for-profit charter schools in Florida?

RQ3. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0 in math, between the not-for-profit and for-profit charter schools in Florida?

RQ4. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0 in science, between the not-for-profit and for-profit charter schools in Florida?

RQ5. To what extent is there a difference in the relationship between the per-pupil expenditures and students' academic performance, as measured by the FCAT 2.0 in reading, between the not-for-profit and for-profit charter schools in Florida?

RQ6. To what extent is there a difference in the relationship between the per-pupil expenditures and students' academic performance, as measured by FCAT 2.0 in math, between the not-for-profit and for-profit charter schools in Florida?

RQ7. To what extent is there a difference in the relationship between the per-pupil expenditure and students' academic performance, as measured by the FCAT 2.0 in science, between the not-for-profit and for-profit charter schools in Florida?

Definition of Terms

Lunenburg and Irby (2008) recommended that all key terms, including all research question and hypothesis variables, have the constitutive or operational definition provided within the definition of terms section. For this study, the following terms were defined:

Charter management organization (CMO). American School Choice (2013) defined a charter management organization as

> A non-profit entity that can either manage certain aspects of a charter school for a board or even manage an entire network of schools from the top-down, such as writing the charter application, filing for grants, or shopping for vendors. (p. 1)

Charter school. As defined by the Florida Consortium of Public Charter Schools (2013), a charter school is "nonsectarian public school that has a contract or charter to provide the same educational services to students as district public schools, which operates with freedom from many of the regulations that apply to traditional public schools" (p. 1).

Educational management organization (EMO). American School Choice (2013) defined an educational management organization as a for-profit company, which creates a network of schools modeled and replicated across the state or country, often overseeing all facets of the educational process.

Gridded-response. The FLDOE (2013) defined gridded response as "test questions that require students to solve a problem for which the answer is numerical. Answers must be typed and bubbled into a number grid" (p. 29).

Math achievement. The FLDOE (2013) utilized the FCAT 2.0 to measure math achievement in "broad reporting categories" (p. 25). The FLDOE (2013) explains the difficulty of the concepts assessed progresses systematically, "as does the complexity of the numerals and mathematical operations" (p. 25) used to assess math knowledge and skill. To calculate the differences between not-for-profit and for-profit charter school math achievement, the percentage of students scoring satisfactory or higher was used.

Not-for-profit charter school. For the purpose of this study, the not-for-profit charter schools included both not-for-profit (freestanding), or without a management company, and not-for-profit (CMO), with a charter management organization.

Reading achievement. As defined by the FLDOE (2011), reading achievement as measured by the FCAT 2.0 consisted of the following reporting categories: vocabulary, reading application, literary analysis, and informational text and research process. To calculate the differences between not-for-profit and for-profit charter school reading achievement, the percentage of students scoring satisfactory or higher was used.

Science achievement. As defined by the FLDOE (2011), science achievement as measured by the FCAT 2.0 consisted of the following reporting categories: nature of

science, earth and space science, physical science, and life science. To calculate the differences between not-for-profit and for-profit charter school science achievement, the percentage of students scoring satisfactory or higher was used.

Overview of the Methodology

A non-experimental study was designed using causal-comparative research methods, with the independent variable being the charter school management model and the dependent variables being the per-pupil expenditure and the FCAT 2.0 reading, math, and science results for the 2011-2012 through 2013-2014 school years. The population for the study was the charter schools in Florida during the same period, with the sample including state-approved and accredited charter schools that received scores for the Florida state assessment, which were maintained by the FLDOE. The FCAT 2.0 was the assessment instrument used to measure student learning during the 2011-2012 through 2013-2014 school years, with assessments being administered for reading, math, and science. Measurements were provided for two variables, FCAT 2.0 and per-pupil expenditure. FCAT 2.0 results were measured using the percentage of students scoring at Level 3 (satisfactory) or higher, based on a 5-point scale. Measurement of the per-pupil expenditure was calculated for each school using the state FTE allotment less management fees where applicable. Data were collected using public access to public records via the FLDOE website and the website of the Florida Auditor General, along with public records requests being made to each charter school to access data regarding charter school management fees. All data were collected and stored in Microsoft 2007 Excel spreadsheets, and then transferred electronically into IBM® SPSS® Statistics Faculty Pack 23 for Windows for analysis.

Organization of the Study

There are five chapters in this study. Chapter one included the background, statement of the problem, the purpose of the study, the significance of the study, delimitations, assumptions, research questions, definitions of terms, an overview of the methodology, and organization of the study. Chapter two offers a review of literature, which includes an overview of school reform in the United States, the history of charter schools in the United States, research on the effect of per-pupil expenditure on student achievement, research finding on the student achievement in charter schools as compared to public schools in the United States, research findings on student achievement in Florida charter schools as compared to Florida public schools, and finally research on not-for-profit versus for-profit charter schools. The methodology used in this research project is described in chapter three. Sections detailed in this chapter included research design, population and sample, sampling procedures, instrumentation, data collection, and data analysis and hypothesis testing, and the limitations. Chapter four is comprised of the descriptive statistics and the results of the hypothesis testing. Chapter five includes a study summary, findings related to the literature, and conclusions.

Chapter Two

Review of the Literature

The purpose of this study was to investigate the not-for-profit and for-profit charter schools in Florida, looking specifically at the per-pupil expenditure in each setting and its possible relationship to student academic performance as measured by the FCAT. The review of literature for this study begins with a historical overview of school reform in the United States, which evolved into a branch of the current school reform movement – the charter school movement. The review of literature continues with summaries of research and data directly related to this study. These include a review of per-pupil expenditure studies, as well as a review of studies focused on the academic achievement of students from charter schools versus public schools, academic achievement of private versus public charter schools, and finally a review of data and statistics of Florida's charter schools.

Overview of School Reform

Since 1635, the United States has had a long history of school reform dating back to the creation of our country's first public school, the Boston Latin School (Freedom Trail Foundation, 2012). However, since 1950, a plethora of reform initiatives have come and gone. Varying social events and reports, ranging from the Red Scare to No Child Left Behind (NCLB), have driven school reform movements.

In 1957 with the Russian launch of Sputnik, schools throughout America began reforming instructional practices in math and science to be competitive in the race to space. According to Powell (2007), the "United States Congress responded a year later with the National Defense Education Act (NDEA), which increased funding for

education at all levels with the focus on scientific and technical education" (p. 1). Upon signing the NDEA Act, President Eisenhower (1958) explained the purpose as strengthening "our American system of education so that it can meet the broad and increasing demands imposed upon it by considerations of basic national security" (para. 1).

The social unrest of the 1960s led the U.S. Office of Education to commission the *Equality of Educational Opportunity* report, led by Coleman and his team of researchers (Towers, 1992). According to the findings in the Coleman Report (Coleman, 1966) "schools [were found to] bring little influence to bear on a child's achievement that is independent of his background and general social context" (p. 325). As a result of the findings of the Coleman Report, programs such as affirmative action and busing for the purpose of desegregation were implemented to provide a more equitable education system. Additionally, in classrooms, practices changed to be more inclusive of all students regardless of race or ability, such as open classrooms and the elimination of age-determinant grade placement. As stated by Lezotte (2001), the Coleman Report also "stimulated a vigorous reaction, instigating many of the studies that would later come to define the research base for the Effective Schools Movement" (p. 1). Mace-Matluck (1987) explained that through the late 1960's and 1970's the Effective School movement struggled to identify effective schools despite multiple studies, program evaluations, and case studies. Lezotte (2001) explained that during the late 1970's the effective schools studies eventually defined common characteristics to most effective schools as including "strong instructional leadership, a strong sense of mission, demonstrated effective instructional behaviors, held high expectations for all students, practiced frequent

monitoring of student achievement, and operated in a safe and orderly manner" (p. 2). Many of the effective school findings have been squandered due to the ability to replicate these practices with fidelity. Additionally, the theories and practices of affirmative action and desegregation ebbed and flowed throughout the same period, which negatively impacted the effective schools movement. Graham (2013) added,

> In the 1980s, education support programs that reached their zenith in response to the "Sputnik challenge" were being scaled back—much to the chagrin of the blue-ribbon panel's members, who saw this as a clear precursor to an ever more pronounced slide in academic achievement. (p. 1)

With the economic downturn of the late 1970s and 1980s and continued academic struggles of U.S. students as compared to our foreign counterparts, disenchantment with public education increased leading to a call for improved educational practices and increased school choice options.

In 1981, Secretary of Education Bell, under President Reagan, and the panel known as the National Commission on Excellence in Education were charged under the authority of 20 U.S.C. 1233a to review the state of education in the United States (Jorgensen & Hoffman, 2003). According to Girod and Girod (2012), *A Nation at Risk* prompted increased "dissatisfaction [with the public school system] which had begun in the 1970s" (p. 7). Dissatisfaction with public schools was further evidenced as a result of *A Nation at Risk*, with Nichols & Berliner (2008) stating that "unless public education received a major overhaul and unless expectations for student achievement were raised, America's economic security would be severely compromised" because "comparisons of the test results and dropout rates of American public school children portrayed a picture

of mediocrity" (p. 4). *A Nation at Risk* became the impetus for two decades of standards-based reform. The effective schools movement initiated the movement for improved education for all students, with *A Nation at Risk* pushing further for a means of doing so, including the creation of specific standards for all students. The U.S. Department of Education (2008) indicated that "early adopters of this approach in the late 1980s and early 1990s often produced content standards that were not very clear or specific, or academically rigorous" (p. 5). Additionally, the U.S. Department of Education (2008) added that "states learned from these experiences, with content standards taking the shape we currently see, which are clearer, grade-level specific, and more academically challenging" (p. 1).

According to Mead (2007), in 1994 under the leadership of President Clinton, the United States Congress passed the Improving America's School Act to advance the improvement and accountability of the public school system. Mead (2007) further explained that the legislation "required states and school districts to identify schools in need of school improvement" (p. 2), with "schools that continued to perform poorly being identified for corrective action" (p. 2). Goals 2000: Educate America Act (P.L. 103-227) quickly followed and was enacted within a month. According to the Elmore (1998), Goals 2000 established a framework by which world-class academic standards were identified, along with a process to provide student support to ensure the standards were met, and a means to measure student progress was created and implemented.

With the new millennium, President George W. Bush requested additional reforms that increased the educational standards and accountability, which resulted in the enactment of the No Child Left Behind Act of 2001 (NCLB) (U.S. Department of

Education, 2008). The NREL (2004) indicated that NCLB provided "a framework for increased student achievement and increased accountability provisions to Title I grantees" (p. 1). Additionally, they went on to state that

> These provisions hold states, school districts, and individual schools accountable for improving the academic performance of all students, with states, districts, and schools making adequate yearly progress (AYP) and the aim of bringing all students to academic proficiency by the end of the 2013–2014 school year. (NREL, 2004, p. 2)

In addition to providing an outline for school improvement, the act also carried a defined set of sanctions. These sanctions were varied and ranged from precursory data analysis and the creation of corrective action plans to the replacement of administration and staff in low-performing schools. As detailed by the NREL (2004) and dependent upon the level of severity of non-compliance, financial sanctions might include devoting at least 10% of its Title I Part A allocation to professional development or providing transportation up to 20% of Title I monies or other sources for students not meeting AYP to receive tutoring. Additionally, in the worst case, sanctions might include re-opening a low performing school as a charter school (NREL, 2004).

History of Charter Schools in the United States

In 1974, Budde presented the concept of charter school education to the Society of General Systems Research. As a former teacher, junior high principal, and educator at the University of Massachusetts, Kolderie (1996) wrote that he always had "an interest in how things work or don't work in organizations" (p. 1). Budde (1974) called for the reorganization of school districts to include education by publicly funded charter

facilities, which included goals for sustainability and success of these entities. Some of the goals detailed by Budde (1974) included: 1) teacher control and responsibility for instruction; 2) student responsibility for their learning and behavior; 3) a twelve-month school calendar for teachers, with 210+ day calendar for students; 4) opportunities for teacher advancement and leadership; 5) principals as instructional leaders and innovators; 6) application of technology and communication innovations; 7) integration of educational research practices; and 8) active participation of parents and local businesses in the education process. Unfortunately, according to Kolderie (2005), "nobody thought there was a problem significant enough to require" (p. 1) such reorganization or restructuring. Kolderie (2005) added that the idea for education by charter lay dormant until the resurgence of restructuring talks brought about by the 1980 report, *A Nation at Risk*, and the Carnegie Forum report, *A Nation Prepared: Teachers for the 21st Century*, which followed in 1986. These reports, in conjunction with lackluster academic performance on the world stage via NAEP and TIMSS assessments, created a sense of desperation in regards to public education and the ability of U.S. students to be academically successful and prepared to compete for jobs against our global competitors. In early 1988 and in hopes of revitalizing his idea of "education by charter," Budde had his paper "published by the Northeast Regional Lab [and] sent it around widely; even to the then-president George H. W. Bush" (Kolderie, 2005, p. 1).

In a presentation to the National Press Club, Shanker, President of the American Federation of Teachers (AFT), presented an "extraordinary speech in which he proposed the creation of a new type of school, which he later referred to as [a] charter school" (Kahlenberg & Potter., 2014, p. 6). Additionally, and as

stated by Kahlenberg and Potter (2014), Shanker desired that the publicly funded and independently managed entities that were based upon the ideas founded by Budde were to be freed from bureaucratic constraints, which prevented teacher empowerment and the creation of educational laboratories. They asserted that "four months after his National Press Club speech, Shanker's idea won the endorsement of the 3,000 delegates to the AFT convention in San Francisco" (Kahlenberg & Potter, 2014, p. 8). This national endorsement promoted further discussion and legislative action among many states, led by Minnesota.

After reading a Shanker article in the *New York Times*, Kolderie (2008) indicated that he and Rollwagen invited Shanker to Minnesota to begin the process of creating a vision for charter schools in that state. In October 1988, Kolderie (2008) continued that Shankar presented his vision of charter schools to the Minneapolis Foundation's Itasca Seminar at Gull Lake, which was dedicated that year to K-12 education. Following the presentation, Kahlenberg and Potter (2014) further explained that a group of attendees including Nathan (a Citizens League member), Senator Reichgott (a Democratic-Farmer-Labor Party member and member of the State Education Committee), and Representative Nelson, were "taken by Shanker's visionary idea to create new schools and empower teachers" (p. 8). According to Kolderie (2008), the group penned the first charter school legislation in the country. The draft legislation gained further support as the board of directors for the Citizens League approved the publishing of the report entitled, *Chartered Schools = Choices for Educators + Quality for All Students*, which promoted the concept of chartered schools and school choice. Despite the

support, the passage of the legislation was unsuccessful in its first two attempts, as the legislation was attached as part of the Senate's omnibus bill. Kolderie (2008) explained that in 1991 through bipartisanship and compromise, led by Senator Reichgott and Representative Nelson, Governor Carlson signed into law the country's first charter school legislation. Kahlenberg and Potter (2014) described that the Minnesota charter school legislation deviated from Shanker's original vision of chartered schools, as this more conservative version failed to provide requirements for universal teacher certification, automatic teacher collective bargaining rights, and did nothing to prevent social isolationism through ethnic and/or racially centered schools. According to Kahlenberg and Potter (2014), "the new, more conservative vision, which promoted neither teacher voice or school integration, quickly swept the country" (p. 9).

Shortly thereafter in 1992, California enacted the country's second charter school legislation. Kolderie (2008) stated the charter school concept was introduced to the California Legislature by Premack, a former intern with the Citizens League from 1986 to 1987, and followed the Minnesota model. Kolderie (2008) stated that the Citizens League leadership, Kolderie, and State Senator Hart composed the legislation that eventually was passed into law on the last day of the legislative session.

With the charter movement now entering the national conversation, a previously failed attempt by United States Senators Durenberg (R-MN) and Lieberman (D-CT) to introduce the federal charter school grant program was reintroduced by Representatives McCurdy (D-OK) and Petri (R-WI). Albeit, the

measure again failed to gain enough supporters to pass, Kahlenberg and Potter (2014) stated that President Clinton "became a strong supporter of charter schools and pushed for federal seed money to promote them" (p. 9), which resulted in further discussion and passing of charter school legislation in six additional states. The U.S. Office of the White House (2001) stated that President Clinton made over fifty public statements in favor of charter schools within the first four months of his presidency and was an "ardent" supporter of charter schools. President Clinton's support led to the enactment of federal legislation in 1994, which provided "nearly $400 million in seed money to organize charter schools" during his tenure (U.S. Office of the White House, 2001, p. 13). With federal support, the advancement of the charter school law spread throughout the United States. The enactment of charter school legislation by year and state is detailed in Table 3.

Table 3

Charter School Legislation by State and Year

Year(s)	Total Number	States
1991	1	MN
1992	1	CA
1993	6	CO, GA, MA, MI, NM, WI
1994	3	AZ, HI, KS
1995	8	AK, AR, DE, LA, NH, RI, TX, WY
1996	7	CT, FL, IL, NJ, NC, SC, DC
1997	3	NV, OH, PA
1998	5	ID, MO, NY, UT, VA
1999	2	OK, OR
2000	0	
2001	1	IN
2002	2	IA, TN
2003	1	MD
2004 - 2009	0	
2010	1	MS
2011	0	
2012	1	WA
2013-2015	0	

Note. Adapted from "The Charter School Laws Across the States: Ranking & Scoreboards" (13th ed.) by A. Zgainer, 2015.

As detailed in Table 3, as of March 2015, there were 42 states and the District of Columbia that had enacted charter school legislation, with eight states having no charter school legislation. Within an eight-year span from 1991 to 1999, the majority of states (35) followed Minnesota's lead and authorized charter school legislation. According to Anderson et al. (2000), additional monetary supports from the federal government aided the expansion of the charter school movement of the 1990s, including the passing of the Public Charter Schools Program in 1994 that offered $6 million toward the advancement of charter schools. Anderson et al. (2000) added that the reauthorization of the Public Charter Schools Program in 1998 contributed to the expansion of the charter school movement through a $145 million dollar appropriation.

The result, according to the National Alliance for Public Charter Schools (2015), was the expansion from the first charter school opened in St. Paul, Minnesota in 1993 to 1,542 charter schools opened and in operation throughout the United States in 1999. With millions of dollars being awarded to charter schools and being used to expand the charter school movement, one must consider if spending more money and creating more charter schools equates to improved learning. The following sections summarize research surrounding per-pupil expenditure, or money spent per child and its relationship to educational outcomes, and research on academic achievement in charter schools versus public schools.

Per-Pupil Expenditure

Since the 1966 publication of the Coleman report, also known as the Educational Opportunity Study, educational funding and its related research has been in question.

The Coleman report utilized the education production function model, or factory input-output model. Biddle and Berliner (2002) summarized the Coleman report findings when they stated,

> Factors related to students' home backgrounds and peer groups in their schools were major generators of achievement, but that school quality and level of school funding had little or no impact after home and peer factors were taken into account. (p. 49)

However, Coleman (1966) wrote that "the relations are not large, but they are all in a direction of somewhat higher achievement: higher pupil instructional expenditure, a curriculum that offers greater challenges, more laboratories and more activities" (p. 316). Biddle and Berliner (2002) explained the Coleman report was "lengthy, its procedures and statistics were complex, and its text was murky" (p. 48). Additionally, Biddle and Berliner (2002) added that the Coleman report was "badly flawed," yet "its findings were vigorously promoted, however, and its suspect conclusion that level of school funding has little impact on student achievement passed into the public domain as a confirmed fact" (p. 48). The report led to the politicization of the topic, as Biddle and Berliner (2002) stated, "conservative forces hostile to the public sector rejoiced because their negative opinions about public schools had been vindicated" (p. 48) and "educators, political liberals, and advocates for disadvantaged students became alarmed and began to explain away the report's conclusions and to attack its authors" (p. 48). School finance reform became common political action across the United States throughout the 1970s, 1980s, and 1990s, resulting in more studies on per-pupil expenditure. Meta-analysis studies conducted by Hanushek (1981, 1986, 1989) and Greenwald, Hedges and Laine

(1996) provided a politicized view and continuation of the debate on the relationship between per-pupil expenditures and student outcomes.

Hanushek began his writing on educational economics in 1981. *Throwing Money at Schools* was a meta-analysis of 130 studies on education production function, which utilized methods of vote counting, significance, and direction. Hanushek (1981) wrote the "universal premise [of the study] is that better schools cost more money," with the corollary being the "schools with higher expenditures should, other things being equal, have higher student performance" (p. 24). Hanushek (1981) determined inputs (expenditures) to include teacher-student ratio, teacher education, teacher experience, teacher salary, expenditures per student, quality of facilities, and quality of administration. He reported statistically significant coefficients (positive, negative, and unknown) for each of the inputs. Hanushek (1981) concluded that "the inputs on which schools tend to concentrate – and which lead to differences in expenditures – appear to have no consistent payoff in terms of higher student achievement" (p. 28). In 1986, Hanushek stated that the "meta-analysis of 147 studies focused on productivity and efficiency aspects of schools as opposed to the ultimate uses of education" (p. 1142). In the 1986 study, he utilized the following inputs: teacher-pupil ratio, teacher education, teacher experience, teacher salary, and expenditure/pupil, with student achievement outputs being measured against student achievement. Again, he reported statistically significant coefficients (positive, negative, and unknown) for each input. Hanushek (1986) found 13 positive statistically significant results out of 65 studies, as compared to three negative statistically significant results for expenditures per pupil. Hanushek (1986) wrote, "Most data do show a strongly positive simple correlation between school

expenditures and achievement" but also stated in his most widely cited conclusion that "there appears to be no strong or systematic relationship between school expenditures and student performance" (p. 1162). In his 1989 meta-analysis of 187 studies using estimated financial input figures, Hanushek summarized his findings as follows, "detailed research spanning two decades and observing performance in many different educational settings provides strong and consistent evidence that expenditures are not systematically related to student achievement" (p. 49).

In response to previous educational production function research studies, Hedges, Laine, and Greenwald (1994) conducted a re-analysis of Hanushek's previously used data. In their re-analysis, Hedges et al. (1994) determined that Hanushek's use of the inference procedure known as vote counting, as well as sampling concerns, were questionable. According to Hedges et al. (1994), their re-analysis replicated "Hanushek's selection of coefficients [that were] counted in each input category" (p. 7). Hedges et al. (1994) explained their re-analysis utilized improved synthesis methods, including "the inverse chi-omega (Fisher) method utilizing two null hypotheses for each of Hanushek's input variables" (p. 8). Hedges et al. (1994) determined that the findings of the re-analysis clearly showed "systematic positive patterns in the relations between educational resource inputs and student outcomes" (p. 8). Moreover, through effect size analysis, Hedges et al. (1994) concluded that "the median half-standardized regression coefficient for PPE computed for all studies [was] .0014," which suggested that "an increase of PPE by $500 (approximately 10% of the national average) would be associated with a 0.7 standard deviation increase in student outcome" (p. 11). The findings of the study were more positive than the findings that Hanushek reported.

In 1996, the team of Hedges et al., under the leadership of Greenwald, conducted a meta-analysis of 60 research studies collected at the district or school level, with the studies being controlled for socioeconomic status. Greenwald et al. (1996) stated the study incorporated two meta-analytic methods, including "combined significance testing and effect magnitude estimation" on each of the "seven input variables examined" (p. 365). The "seven input variables included per-pupil expenditure, teacher ability, teacher education, teacher experience, teacher salary, teacher-pupil ratio, and school size" (Greenwald et al., 1996, p. 365). When comparing the median half-standardized coefficient for the PPE, the findings of the 1996 study were not as strong as were those of the 1994 study. The result was a somewhat smaller effect due to a median half-standardized coefficient for the PPE of 0.0003, which according to Greenwald et al. (1996) resulted in "an increase in achievement of nearly one-sixth of one standard deviation" (p. 380). In conclusion, Greenwald et al. (1996) summarized that "school resources are systematically related to student achievement and that these relations are large enough to be educationally important. Global resource variables such as PPE show strong and consistent relations with achievement" (p. 384).

Additional studies throughout the 1980s and 1990s continued to refute the studies of Hanushek. In each of the studies (Dolan & Schmidt, 1987; Ellinger, Wright, & Hirlinger, 1995; Ferguson, 1991; Harter, 1999; Wenglinsky, 1997a, 1997b), a strong and positive relationship was found between per-pupil expenditure and significant student improvement. Additionally, Elliott (1998), in her study on per-pupil expenditure and its relationship to math and science outcomes, concluded that "money does, in fact, affect students' achievement" (p. 239). Elliott (1998) elaborated in stating that "in the case of

math, part of the positive effect of expenditures on achievement was accounted for by the mediating effect of teachers' educational level and years of teaching experience" (p. 239). In regards to the science results, she stated, "the results provid[ed] strong evidence that how money is spent affects what takes place in the classroom, which, in turn, affect[ed] students' learning" (p. 240).

With a decisive swing from the findings of Hanushek, and as aligned with the recommendations of Greenwald et al. studies, efforts to use the most effective means of per-pupil expenditures were utilized to improve student achievement through the early 21st century. As of 2015, researchers continued to tout research-based rationales for increased per-pupil expenditure. Jackson et al. (2015), in writing about the longitudinal effects of school finance reform changes on adults found

> that a 10 percent increase in per-pupil spending each year for all twelve years of public school leads to 0.27 more completed years of education, 7.25 percent higher wages, and a 3.67 percentage-point reduction in the annual incidence of adult poverty; effects are much more pronounced for children from low-income families. (p. 1)

The topic of per-pupil expenditure has long been a debated and well-researched issue, with the subject coming to the forefront of educational policy discussions because of the Coleman report. Since the 1966 report, findings have been mixed, with Hanushek concluding that increased spending does not result in increased student achievement. Throughout the 1980s and 1990s, a plethora of researchers found that increased, targeted spending does result in higher student achievement. Thus, the education pendulum

swung in favor of increased student spending, but increased spending remained a highly debated subject.

Academic Achievement of Charter Schools as Compared to Public Schools

As stated by Kolderie (1990), the primary purpose of school restructuring and "chartering" was "greater autonomy for individual schools, professional status for teachers, and real accountability for student performance" (p. 4). Nathan (1996), who believed that chartering offered autonomy, innovation, and increased accountability, which would result in improved student achievement, shared this belief. As noted by O'Brien and Dervarics (2012), rigorous charter school research is still in its infancy, as the majority of existing charter school studies are snapshots, not evaluations; clustered in a few states; focused on a specific district or model; contained within one state; and, tend to be descriptive in nature. This section will attempt to summarize existing research on charter school academic performance as compared to that of public schools. To ensure the validity, applicability, and relevance of the data, only rigorous, multi-state meta-analyses were reviewed. These multi-state meta-analyses were conducted by the NAEP (2003), Betts and Tang (2008), the National Alliance for Public Charters (2014), the Center for Research on Educational Outcomes (2009, 2015), and AYP comparisons from 2005 to 2010 with data provided by the National Alliance for Public Charter Schools (2015).

In response to the growing charter school movement, the U.S. Department of Education in conjunction with the National Assessment Governing Board and the National Center for Education Statistics conducted a pilot study of the nation's charter schools. The pilot study utilized the 2003 NAEP data also known as the nation's report

card assessment, to ascertain 4th grade charter school student performance in the areas of reading and math as compared to that of 4th grade public school students. The NAEP utilized a 500-point scale to score student performance in reading and math, which categorized overall student performance for both areas into three levels, which included basic, proficient, and advanced. The 2003 study included 150 charter schools, from which a random sample of student participants was selected. Shown in Table 4 are the final sample numbers of students included in the study.

Table 4

2003 NAEP Pilot Study Sample by Subject and Type of School

Genre	Charter Students	Public Students
Reading	3,296	188,488
Math	3,238	188,201

Note. Adapted from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress, 2003 Reading and Mathematics Charter School Pilot Study, 2003.

In summarizing the results of the study for reading, the results of the NAEP (2004) report indicated there was "no measurable difference between the reading scores of the charter school students and the other public school students overall" (p. 4). However, the NAEP (2004) stated a significant difference was found with female students from charter schools underperforming their female peers in public schools, with respective scale scores of 215 and 220. Additionally, significant differences existed between charter school students qualifying for free-reduced lunch as compared to public school students qualifying for free-reduced lunch, with respective scale scores of 195 and

201. When comparing achievement levels, "the observed differences in percentages at or above Basic and Proficient achievement levels were not significant for any groups defined by gender, race/ethnicity, eligibility for free/reduced-priced lunch, or type of school location" (NAEP, 2004, p. 5). Math results for this study were significantly different as compared to reading results. The findings indicated that "national results showed a lower average mathematics score overall for fourth grade students in charter schools" (NAEP, 2004, p. 7). Interestingly, no significant difference in math performance was found when looking at different race/ethnicity groupings, which included Whites, Blacks, and Hispanics. Math achievement level designations mirrored that of the math scale scores, with 69% of charter school students scoring Basic, as compared to 76% of public school students. Additionally, 25% of charter school students scored Proficient as compared to 31% of public school students. As stated by NAEP (2004), "The percentage of fourth grade students at or above Basic and at or above Proficient were lower in charter schools than in public schools for students overall" (p. 8). In summary, "no measurable difference in overall reading performance [and] lower overall charter school mathematics performance" was found (NAEP, 2004, p. 1).

The 2008 meta-analysis by Betts and Tang included data from 13 studies, all of which utilized either a random-lottery approach or value-added modeling approach. According to Betts and Tang (2008), the study "was designed mainly to produce estimates of how typical charter schools perform in various studies rather than to report on whether the average study produced positive or negative results." The findings of this study were mixed. Betts and Tang (2008) stated "elementary and K-8 charters taken together, typically outpace traditional public schools," with "the effect size [for] elementary and K-

8 charter schools [being] approximately 8% of a standard deviation for one-year gains in both math and reading" (p. 4). Conversely, Betts and Tang (2008) found

> the size of the estimated effects at the middle and high school level are far smaller, with effect sizes of less than 1% of a standard deviation at the middle school level [and] at the high school level, the median effect sizes are negative and fairly large (roughly -0.15 to -0.2). (p. 5)

In summary, Betts and Tang (2008) concluded the "overall evidence suggests that charter schools more typically outperform than underperform their traditional public school counterparts" (p. 4).

In analyzing the growing amount of charter school research, The National Alliance for Public Charter Schools commissioned an annual review of research data to measure and report on charter school academic performance. In its 5th edition, published in 2009, the results of the meta-analysis of 140 studies were included. The study models included in the meta-analysis were charter school panel studies, cohort change studies, and snapshot studies. The panel study model that was utilized was a longitudinal study linked to student-level data allowing for analysis of gains or growth in academic achievement; a cohort change study model looked at changes in performance over time, and a snapshot study only considered academic performance at one point in time. Nicotera (2009) wrote, "Neither change over time or snapshot [studies] provided definitive evidence to draw conclusions about the effectiveness of charters" (p. 3). Other purposive requirements for inclusion in this study included that the studies must "compare charter school achievement with that of traditional schools, the study must use serious research methods, and the study must examine a significant segment of the

charter sector" (Nicotera, 2009, p. 2). The data were analyzed based upon two periods, pre- and post-2001. The findings of the study are detailed in Table 5.

Table 5

2009 Charter School Achievement: Summary of Charter School Reading and Math Achievement Gains as Compared to Public Schools

Genre	Pre-2001	Post-2001
Reading		
Larger gains	7	18
Similar gains	10	12
Smaller gains	14	14
Math		
Larger gains	4	17
Similar gains	4	17
Smaller gains	20	14

Note. Adapted from "Charter School Achievement: What We Know", 5th Edition, April 2009: Table 1: Summary of Charter School Math Achievement, by Years of Data in Studies and Table 2: Summary of Charter School Reading Achievement, by Years of Data in Studies.

As demonstrated in the post-2001 data, there was a significant improvement in the area of larger gains and proportional decrease in the area of smaller gains. Nicotera (2009) concluded that "more recent academic years show that charter schools produce more instances of larger achievement gains in both math and reading when compared to the traditional public schools" (p. 3).

Also in 2009, the Center for Research on Education Outcomes (CREDO) published the "first national assessment of charter school impacts" (p. 1). Longitudinal

student-level data from 15 states was utilized in the study, or more than 70% of the students in charter schools in the United States, to create virtual public school twins to "test whether students who attend charter school fare better than if they instead attended traditional public schools in their community" (p. 1). "The results of the study measured academic gains in reading and math, measured in standard deviation units" (p. 1). "Charter school students on average see a decrease in their academic growth in reading of .01 standard deviation [and] in math their learning lags by .03 standard deviations on average" (CREDO, 2009, p. 6). When looking at individual state results, CREDO (2009) established a large degree of varying results, with five states displaying significant growth ranging from .02 to .07 standard deviations. Meanwhile, CREDO (2009) detailed that six states experienced significantly "lower learning gains ranging from -.01 to -.06" (p. 45) standard deviations while the results from three states were mixed. As further detailed in CREDO (2009), 17% of charter school students exceeded their typical public school peer in math by a significant amount. However, CREDO (2009) further explained that 46% of charter school students had indistinguishable math gains as compared to their typical public school peers while 37% of charter school students had math gains that were significantly below that of their typical public school peers. CREDO (2009) concluded that a

> decent fraction of charter schools, 17 percent, provide superior education opportunities for their students. Nearly half of the charter schools nationwide have results that are no different from the local public school options and over a third, 37 percent, deliver learning results that are significantly worse than their

students would have realized had they remained in traditional public schools. (p. 1)

Blalock and Amrein-Beardsly (2013) analyzed the 2013 NAEP results at the request of bloggers who responded to the Thomas B. Fordham Institute report that declared Ohio's charter school were significantly outperformed on the NAEP by the state's public schools. In 2013, 23 states had enough charter schools to sample and comparatively analyze in comparison to public schools. Blalock and Amrein-Beardsly (2013) found that half of these states had students who "performed no differently than students in public schools at each grade and subject pairing" (p. 1). In the remaining half of the states, significant differences in achievement occurred, with half of the states having public schools outperforming charter schools and the other half having charter school outperforming public schools. In their deeper analysis at the state level, Blalock and Amrein-Beardsly (2013) found that four states had significant differences of more than 20 points. Blalock and Amrein-Beardsly summarized that Alaska was the only state whose charter schools significantly outperformed public school students on the NAEP, with a 20-point difference in 4th grade reading and nearly a 10-point difference in all other subject and grade level pairings. Conversely, Blalock and Amrein-Beardsly (2013) reported that Maryland, Ohio, and Pennsylvania public schools had significantly outperformed charter schools by an average of 23 points. Blalock and Amrein-Beardsly (2013) concluded, "It is clear that performance of charter school students, when compared to public school students, were mixed in 2013 on the NAEP" (p. 1).

CREDO (2015) conducted a two-year study to identify successful charter school models for students of color and students in poverty. Similar to their 2009 study, they

utilized student-level data to project charter school student academic achievement in a projected one-year period as compared to that of a virtual peer from a neighboring traditional public school. Student-level data from 2006-2007 through 2011-2012 was collected from 41 urban areas in 22 states and paired with a virtual peer model. CREDO (2015) found that "urban charter schools in the aggregate provide [a] significantly higher level of annual growth in both math and reading compared to the traditional public school peers" (p. v), with standard deviations for annual math learning gains being +0.055 and for annual reading learning gains being +0.039. Included in Table 6 are the annual learning gains by school level, as well as the converted number of days of additional learning gained or lost.

Table 6

Annual Urban Charter School Learning Gains by School Level

	Math		Reading	
School Level	Effect Size	Days	Effect Size	Days
Elementary	.056	+40	.046	+33
Middle School	.101	+73	.063	+45
High School	.044	+32	.012	+9

Note. Adapted from" Impact of Urban Attendance on Annual Learning Gains by School Level" from "Urban Charter School Study Report on 41 Regions" by CREDO, 2015, p. 24.

As seen in Table 6, gains in math exceeded those for reading. Additionally, urban middle school gains in both math and reading exceed those at the elementary and high school levels. A comparison of math and reading learning gains, classified as better, worse, or the same for the schools within the 41 urban centers are found in Table 7.

Table 7

Number of Urban Charter Schools Making Learning Gains as Compared to Traditional Public Schools

Type of Learning Gain	Math	Reading
Better Learning Gains	42	38
Worse or Same Learning Gains	57	62

Note. Adapted from "Table 11: School-level Quality Comparisons – 41-Region Urban Charter School Study Results and 2013 National Charter School Study" by CREDO, 2015, *Urban Charter School Study Report on 41 Regions*, p. 27. Copyright 2015 by Center for Research on Education Outcomes.

CREDO (2015) explained that "learning gains for charter school students are larger by significant amounts for Black, Hispanic, low-income, and special education students in both math and reading" (p. vi). Displayed in Table 8 are the effect sizes for annual learning gains for Black, Hispanic, and White students attending urban charter schools, as well as the number of converted days of additional learning gained or lost.

As seen in Table 8, African American students benefitted the most from attending an urban charter school, with the highest annual learning gains in both math and reading. The same benefit was not found for Caucasian students who attended urban charter schools, with Caucasian students having negative effect sizes in math and reading. CREDO (2015) concluded that "despite the overall positive learning impacts, there are urban communities in which the majority of the charter schools lag the learning gains of the traditional public school counterparts, some to distressingly large degrees" (p. vi).

Table 8

Annual Urban Charter School Learning Gains by Racial Demographic

	Math		Reading	
Race	Effect Size	Days	Effect Size	Days
Black	0.051	+36	0.036	+26
Hispanic	0.029	+22	0.008	+6
White	-0.047	-36	-0.021	-14
Overall	0.055	+40	0.039	+28

Note. Days = The number of learning days gained or lost based on effect size. Adapted from "Table 11: Impact of Urban Attendance on Annual Learning Gains for All Urban Regions" by CREDO, 2015, *Urban Charter School Study Report on 41 Regions*, p. 17. Copyright 2015 by Center for Research on Education Outcomes.

Lastly, under Title I of ESEA (2001), "each State must define what constitutes 'adequate yearly progress' (AYP) for each Title I school and LEA toward enabling children to meet the high performance levels expected of all children, as well the State assessments and other measures" (p. 2) used to measure growth toward meeting the adequate yearly progress. As such, public and charter schools were required to meet the annual requirement of AYP. Data were collected from the National Alliance for Public Charter Schools utilizing the Public Charter School Dashboard: A Comprehensive Data Resource from the National Alliance for Public Charter Schools. Data were collected for public schools and charter schools as it related to making AYP and not making AYP for school years 2005-2006 through 2009-2010. The results are displayed in Table 9.

Table 9

2005-2010 AYP Percentage Comparisons for Charter and Public Schools

Year	Charter			Public		
	Making AYP	Not Making AYP	Not Reported	Making AYP	Not Making AYP	Not Reported
2005-2006	61.30	32.09	6.61	68.91	30.16	0.93
2006-2007	64.72	32.84	2.44	65.54	29.58	4.88
2007-2008	63.50	34.06	2.44	62.77	37.23	0.00
2008-2009	63.61	33.07	3.32	64.53	35.47	0.00
2009-2010	56.06	39.07	4.87	57.22	39.30	3.48
Average	61.84	34.21	3.95	63.79	34.34	1.87

Note. Adapted from data collected from the "National Alliance for Public Charter Schools: Public School Dashboard," by the National Alliance for Public Charter Schools, 2016, Copyright 2005-2015 by the National Alliance for Public Charter Schools. Retrieved from http://www.publiccharters.org/dashboard/reports

Based on average percentage scores from 2005 to 2010, evidence provided in Table 9 shows that more public schools achieved annual AYP goals as compared to charter schools. The data also shows the differential in the percentage of schools making AYP between the public and charter schools closing over the five-year period, with charter schools slightly surpassing public schools in 2009-2010. A similar trend exists in the data for the percentages of schools not making AYP. The five-year average differential for making AYP was +1.95% in favor of the public schools, the five-year average

differential for not making AYP was +0.13% in favor of charter schools not making AYP. In looking at Table B1 and Table C1 (see Appendices B & C), the data establishes a wide variability in performance in meeting AYP goals between public and charter schools. Differentials in making AYP were varied, with the largest extremes occurring in New Hampshire in 2007-2008. In New Hampshire during the 2007-2008 school year, there was a -61.8% differential with charter schools outperforming public schools with 100% of the charter schools making AYP. However, in Oklahoma during the 2005-2006 year, the opposite occurred with there being a +47.2% differential. In Oklahoma during the 2005-2006 school year, only 41.7% of the charter schools met their AYP goals, whereas 88.9% of the public schools met their AYP goals. When looking at the data for not making AYP goals, the same wide variances occurred. The largest variance occurred in Missouri during the 2005-2006 school year with 100% of the charter schools failing to meet the AYP goals, which created a differential of -70.7%. Conversely, New Hampshire showed the largest improvement in 2009-2010, with only 12.5% of the charter schools not meeting AYP goals, which resulted in a +56.2% differential with the public schools.

In summary, charter school research continues to provide a wealth of data, yet mixed results were found when analyzing academic achievement of charter schools as compared to that of public schools. As detailed from the 2003 NAEP Charter School Pilot Study through the 2015 CREDO study of urban charter schools, results of academic performance of charter schools as compared to public schools was mixed, both at the national and state levels. Several positive corollaries were discovered for charter schools including charter schools achieving higher mathematics gains than those in reading,

elementary charter schools finding more overall success than middle and high schools, and charter schools benefitting and providing increased learning gains for students of color and poverty as compared to those in public schools. Largely, however, charter schools are closing the gap between public and charter school academic achievement but are still slightly underperforming.

Charter School Achievement as Compared to Public Schools in Florida

The Office of Program Policy Analysis and Government Accountability (OPPAGA) (2002), an office of the Florida State Legislature, reported Florida charter schools, since their inception in 1996, "are not reporting their students' progress compared to similar students in the district school system" (p. 3). Additionally, OPPAGA (2002) stated, "Although required by law since 1996, the department still has not published a report that analyzes and compares the overall performance of charter school students to comparable public school students" (p. 3). Shortly thereafter, data were analyzed, and studies were conducted. Many of these studies were limited in scope and rigor. This review will provide a summary of the following studies of Florida charter schools conducted by the National Alliance for Public Charter Schools and other made available after 2002, including studies by Loveless (2002); Greene, Forster, & Winters (2003); OPPAGA (2005); Sass (2006); and the Florida Department of Education (2014).

Loveless (2002) analyzed charter school academic performance against that of like public schools. He reviewed data from 1999 to 2001 in 10 states, resulting in the participation of 638 charter schools. From this data, he provided state-by-state and collective charter school academic performance analyses. Loveless (2002) found "charters in these 10 states score about one-half standard deviation below average (*z*-

score of -0.47)" (p. 10). Loveless (2002) explained, "68% of [public] schools score higher than the average charter school" (p. 10). Upon disaggregating the data by state, Loveless (2002) found that charter schools in Florida, Michigan, Minnesota, Pennsylvania, and Texas scored dramatically worse, with the charter schools in these states scoring approximately one standard deviation or more below the public schools. Shown in Table 10 are the disaggregated data for Florida, which includes achievement scores for reading and math adjusted for socio-economic status, race, and weighted enrollment.

Table 10

1999-2001 Adjusted Achievement Scores of Florida Charter Schools

Grade	Reading*	Math*
4	-0.27	+0.01
8	-0.11	-0.19
10	-0.36	-0.59
Average	-0.25	-0.26

Note. Adapted from *"*Adjusted Achievement of Charter Schools by Grade and Subject*"* by Loveless, T., 2002, *Charter School Achievement and Accountability*, p. 33. Copyright 2002 by Loveless, T. *$p < .05$.

Two-tailed test of *z*-score = 0.

The deficits seen in Florida are "statistically significant" and equivalent to being placed in the "16th percentile" (Loveless, 2002, p. 11). As demonstrated by this data from 1999-2001, it was deemed that Florida public schools significantly outperformed Florida charter schools at the time of the Loveless study. Loveless (2002) concluded, "On tests

of academic achievement, charter schools in the study scored significantly lower than regular public schools with similar students" (p. 22).

In 2003, Greene et al. published the first study to compare "untargeted charter schools serving the general population to their neighboring regular public school" (p. i). The study included 11 states, all of which had large enough charter school numbers and enrollments to create a sufficient sample. These states included Arizona, California, Florida, Texas, Michigan, Wisconsin, Ohio, Colorado, North Carolina, Minnesota, and Pennsylvania. Greene et al. (2003) limited inclusion in the study due to charter schools having targeted enrollment, which was defined as being a "school targeted to an educationally advantaged or disadvantaged population if it gave that population preferential treatment in admissions or if it made specific efforts to recruit that population" (p. 6). Each untargeted charter school was paired with the closest untargeted neighborhood public school, with a regression analysis being calculated on year-to-year data for the untargeted charter and matched untargeted public school in both math and reading. The first finding that Greene et al. (2003) encountered were "very large variations from state to state in the targeting of charter schools," (p. 8) with states possessing targeted populations ranging from 12% (Wisconsin) to 95% (Michigan). In regards to the math and reading results, Greene et al. (2003) stated that untargeted charter schools math test score improvements that "were 0.08 standard deviations greater" and "reading test score results showed 0.04 standard deviations greater improvement" (p. 8) as compared to their closest regular public school over a one year period. When looking at the state level and Florida, Greene et al. (2003) found that "Florida charter schools achieved year-to-year math and reading score improvements that were each 0.15 standard

deviation greater than those of nearby public schools" (p. 9). In regards to untargeted Florida charter schools, Greene et al. (2003) concluded, "We can be very confident that charter schools that serve the general population of students experienced greater gains in SAT-9 math and FCAT reading scores than did neighboring regular public schools" (p. 10).

In 2005, OPPAGA completed a state-mandated review of charter school performance, as compared to that of Florida's public schools. OPPAGA (2005) found that Florida "charter school performance varies widely. About one-third of all charter schools had a majority of students who are not meeting grade-level expectations in math and reading and a majority whose annual learning gains are less than their peers statewide" (p. 3). Moreover, OPPAGA (2005) stated, "Charter school students are slightly less likely to meet grade-level expectation in math and reading" (p. 5). The difference in the percentage of Florida charter school 5th grade, middle school, and high school students who did not meet grade-level expectations and making expected learning gains, as compared to Florida public school students is detailed in Table 11.

Table 11

Annual Math and Reading Learning Gain Differences Between Similar Charter Schools and Public Schools

Grade/Level	Math	Reading
5th	-16%	-10%
Middle School	-1%	-4%
High School	+23%	+38%

Note. Adapted from "Exhibit 4: Charter School Students Were Less Likely to Meet Grade-Level Expectations in Math and Reading in 2003-04" by OPPAGA, 2005, *Charter School Performance Comparable to Other Public Schools; Stronger Accountability Needed*, Report No. 05-21, p. 5. Copyright 2005 by Office of Program Policy Analysis and Government Accountability.

As shown in Table 11, charter high school students achieved positive learning gains, as compared to the similar public high school students. Additionally, elementary charter school students were outperformed in both math and reading, while middle school charter school students were comparable to their similar public school peers. Detailed in Table 12 are the FCAT results for both charter and public school students in grades 3-10. As displayed in Table 12, public school students are outperforming charter school students.

Table 12

Average Percentage of Florida Students in Grades 3-10 Scoring Satisfactory or Higher (Levels 3-5) on the 2003-2004 FCAT

School Type	Math	Reading
Charter	44.0	42.5
Public	47.4	44.8

Note. Adapted from "Exhibit 4: Charter School Students Were Less Likely to Meet Grade-Level Expectations in Math and Reading in 2003-04" by OPPAGA, 2005, *Charter School Performance Comparable to Other Public Schools; Stronger Accountability Needed*, Report No. 05-21, p. 5. Copyright 2005 by Office of Program Policy Analysis and Government Accountability.

As shown in Table 12, on the FCAT 2003-2004, public school students outperformed charter school students in both reading and math, with a 2.3% differential in reading and a 3.4% differential in math. OPPAGA (2005) also found that charter school students in grades 7-10 scored at a nearly equivalent level to that of their public school peers in both reading and math. The authors of the OPPAGA study (2005) concluded that overall charter schools are making "similar annual learning gains in math and reading when compared to students in traditional public schools" (p. 2).

The following year, Sass (2006) conducted a three-year longitudinal study of Florida charter schools as compared to Florida public schools using an estimation of the value-added and restricted value-added models of warehoused FCAT data. Sass (2006) found "the value-added results indicate that student achievement in the average charter school is 1.2 scale-score points lower in math and 0.5 points lower in reading than the average traditional public school" (p. 104). Sass (2006) elaborated on the differences in

achievement and stated that when comparing "the average charter achievement differentials to the average year-to-year score gains, the differences are more substantial, equivalent to 8 percent of the average 16-point year-to-year gain in math and 4 percent of the average 12-point year-to-year gain in reading" (p. 104).

Sass also analyzed the performance of Florida charter schools as it related to longevity of the institution. Sass (2006) stated that "brand-new charters tend to have lower student achievement than the average traditional public school" (p.119). He added that

> by their fifth year of operation, Florida charter schools are found to reach a par with traditional public schools in math and to produce reading achievement scores that exceed those of the average traditional public school by an amount equal to 10 percent of the average annual achievement gain. (Sass, 2006, p. 119)

The FLDOE's (2014) report used data from the 2012-2013 school year. The report included a multitude of comparisons between the state's charter and public school students. The FLDOE (2014) made comparisons in three areas, which included "proficiency, achievement gaps, and learning gains" (p. iv) that were based upon achievement scores from the FCAT 2.0. As it related to proficiency, data were provided and analyzed for students scoring at the proficient level or higher, which translated to a score of 3 or higher on a 5-point scale. The FLDOE (2014) defined the proficiency data analysis as having utilized 63 charter school to public school comparisons, resulting in 58 of the 63 comparisons finding students enrolled in charter schools demonstrating higher levels of proficiency. Provided in Table 13 are data regarding the total percentage of

students in charter schools and public schools who scored satisfactory or higher (Level 3 or above) in reading, math, and science.

Table 13

2012-2013 Percentage of Students Scoring Satisfactory or Higher (Level 3-5) on the FCAT 2.0 by Subject and School Type

School Type/Average	Reading	Math	Science
Charter Elementary	65.1%	61.1%	55.2%
Public Elementary	59.6%	58.9%	54.2%
Charter Middle School	66.1%	60.7%	53.0%
Public Middle School	57.9%	53.7%	48.5%
Charter High School	62.5%	NA	NA
Public High School	54.7%	NA	NA
Charter Average	64.6%	61.2%	54.1%
Public Average	57.4%	56.3%	68.1%

Note. Adapted from "Percent of Students Scoring a Level 3 or Above on FCAT 2.0 Reading/Math/Science Charter Schools and Traditional Public Schools All Students" by Florida Department of Education, *Student Achievement in Florida's Charter Schools: A Comparison of the Performance of Charter School Students with Traditional Public School Students*, 2014, p. 4, 8, and 12, Copyright 2014 by the Florida Department of Education.

Based on the data presented in Table 13, during the 2012-2013 school year, Florida charter school students bettered traditional public school students in all areas, with the largest cumulative (elementary, middle, and high school) average proficiency percentage differential occurring in reading and the smallest differential occurring in science. According to the FLDOE (2014), additional disaggregation of data found that Florida charter school students classified within the demographics of race, free and

reduced lunch participants, English Language Learners, and students with disabilities considerably outperformed their public school counterparts in each grade level and subject area.

The FLDOE (2014) used 96 comparisons when analyzing learning gains for reading, math, and science. The FLDOE (2014) reported that 76 of the comparisons established that charter school students made more gains than did their public school peers, with 10 comparisons showing no significant difference, and 10 comparisons finding significant public school learning gains. The percentage of charter and traditional public school students making learning gains in reading and math, as well as being disaggregated by the aforementioned demographics are shown in Table 14.

Table 14

Students Making Learning Gains in Florida Charter and Public School Students Based Upon 2012-2013 FCAT 2.0 Results

Subject	All	Black	White	Hispanic	Free Reduced Lunch	Students with Disability
Reading						
Charter	65.0%	60.0%	64.0%	66.0%	62.0%	55.0%
Public	62.0%	56.0%	64.0%	63.0%	59.0%	52.0%
Math						
Charter	64.0%	57.0%	67.0%	65.0%	61.0%	56.0%
Public	64.0%	57.0%	67.0%	63.0%	60.0%	53.0%
Average						
Charter	64.5%	58.5%	66.5%	65.5%	61.55	55.5%
Public	63.0%	56.5%	65.5%	63.0%	59.5%	52.5%

Note. Adapted from "Learning Gains of the Lowest Quartile Reading" by Florida Department of Education, *Student Achievement in Florida's Charter Schools: A Comparison of the Performance of Charter School Students with Traditional Public School Students*, 2014, p. 39-40, Copyright 2014 by the Florida Department of Education.

A lower percentage of Black and Hispanic students and students with a disability, in both the charter and public school settings, made learning gains during the 2012-13 school year. Additionally, the data established that the cumulative average of students making learning gains in charter and public schools was nearly equal, with the charter school students slightly outperforming their public school peers. During the 2012-2013 school year in Florida, charter school students, particularly Black and Hispanic students,

students of poverty, and special needs students, outperformed the Florida public school students, and established forward momentum in the charter school movement.

In summary, the academic performance of Florida's charter school students, just as the national studies indicated, was mixed, but improving. Variations in study methodologies, study results, along with variations in the quality of charter schools and charter school data make the findings difficult to analyze. Florida's charter school students showed strength in their reading and math, as compared to science. Additionally, Florida's students of color, poverty, and special needs appeared to benefit from participation in a charter school program.

Academic Achievement of Students in Not-for-Profit and For-Profit Charter Schools

Lake et al. (2010) defined charter schools as "semi-autonomous public schools operated by private entities (for-profit or nonprofit) under contract-like relationships with school districts and other government authorities, as permitted by law" (p. 3). They added that with the vast growth in the number of charter schools across the country, two management models proliferated, the "charter management organization (CMO) and the educational management organization (EMO)" (p. 3). Lake et al. (2010) stated that CMOs and EMOs play an integral part in the advancement of the charter school movement through replication, economies of scale, and collaboration and support between similar schools (p. 3). In regards to the increasing number of charter schools, privatization of these schools, and pursuit of profits, Miron (2011) declared "private operators may bring expertise or experience, but they also glean high management fees and tend to spend less on instruction – and reports continue to show the EMO-operated

schools perform less well than non-EMO operated schools" (p. 3). The National Alliance for Public Charter Schools (2014) defined CMOs and EMOs as follows:

> Charter Management Organizations (CMOs) are nonprofit entities that manage two or more charter schools. CMOs often provide back office functions for charter schools to take advantage of economies of scale, but some also provide a wider range of services—including hiring, professional development, data analysis, public relations and advocacy. Education Management Organizations (EMOs) are for-profit entities that manage charter schools and perform similar functions as CMOs. EMOs generally charge a management fee for their services to charter schools. (p. 1)

CREDO (2013) clarified that these "definitions are not dependent on for-profit/non-profit status" (p. 1). As the charter movement expanded through the 1990s and early 2000s, the focus of the majority of research was not on the charter schools and the related management models, but charter school achievement versus that of traditional public schools. Only in the last five years has research on the educational outcomes of the CMO/EMO or not-for-profit/for-profit models been more rigorously addressed. Thus, there is limited research on CMO/EMO or not-for-profit /for-profit charter schools.

Hill and Welsch (2007) conducted a study of Michigan's EMOs, looking at educational outcomes of the not-for-profit and for-profit models. The study utilized four years of Michigan's Educational Assessment Program math scores for students in grades 4 and 8. The data analyzed for the study was from school years 2001-2002 through 2004-2005. As described by Hill and Welsch (2007), stated scores were reported numerically from Level 1 to 4, with Level 1 being defined as "exceeds Michigan

standards" and 4 being defined as "Apprentice" (p. 8). In explaining the findings, Hill and Welsch found that "for-profit organizations have a lower percentage of students scoring at levels 1 and 2 and a larger percentage of students scoring at levels 3 and 4 than not-for-profit schools" (p. 9). In Table 15, the Hill and Welsch findings from Michigan are displayed.

Table 15

Michigan Charter School Math Proficiency by Level and Charter School Model

Level of Proficiency	All Charters	For-profit EMOs	Not-for-profit EMOs
Level 1	16.8%	15.8%	18.9%
Level 2	30.5%	29.8%	31.9%
Level 3	30.5%	31.1%	28,4%
Level 4	22.4%	23.2%	20.9%

Note. Adapted from "Table 1: Descriptive Statistics" by Hill and Welsch, 2007, *Is there a Difference Between For-Profit Versus Not-For-Profit Charter Schools?*, p. 21. Copyright 2007 by the University of Wisconsin–Whitewater.

In summation, Hill and Welsch (2007) indicated there was "evidence of decreased student attainment in schools run by for-profit entities" (p. 7). Further analysis of the data found "the difference between for-profit and not-for-profit may be due to policies other than for-profit charter school spending, since our findings remain constant whether or not we control for expenditure per-pupil" (Hill and Welsch, 2007, p. 17).

As used in their 2011 report, the National Association for Public Charter Schools (NAPCS) (2011) defined CMOs and EMOs as follows:

> Charter Management Organizations (CMOs) are nonprofit entities that manage two or more charter schools [and] Education Management Organizations (EMOs)

> are for-profit entities that manage charter schools and perform similar functions as CMOs. EMOs generally charge a management fee for their services to charter schools. (p. 1)

The National Association for Public Charter Schools (NAPCS) (2011) analyzed and compared a wealth of data, including the total number of schools, the total number of students, growth, and the total number of CMO and EMO providers. NAPCS (2011) stated that during the 2009-2010 school year, "Texas and California had the most CMOs, while Michigan and Florida had the most EMOs" (p. 1). Additionally, the percentage of students meeting or not meeting AYP goals by charter model are displayed in Table 16.

Table 16

Charter School Students Meeting and Not Meeting AYP Goals by Year and Model

Year and AYP	CMO	EMO	Free-standing
2007-2008			
Met Goal	62.3%	53.4%	62.2%
Did Not Meet Goal	37.7%	46.6%	37.8%
2008-2009			
Met Goal	63.6%	56.3%	63.8%
Did Not Meet Goal	36.4%	43.7%	36.2%
2009-2010			
Met Goal	66.4%	50.8%	58.9%
Did Not Meet Goal	33.6%	49.2%	41.1%

Note. Adapted from "Table 4: Charter School Demographics" by the National Alliance for Public Charter Schools, 2011, *CMO and EMO Public Charter Schools: A Growing Phenomenon in the Charter School Sector Public Charter Schools Dashboard Data from 2007-08, 2008-09, and 2009-10*, p. 5. Copyright 2011 by the National Alliance for Public Charter Schools.

The National Alliance for Public Charter Schools summarized the findings as follows

> The percentage of CMO charter schools making adequate yearly progress (AYP) increased from 62.3 percent in 2007-2008 to 66.4 percent in 2009-2010, whereas the percentages of EMO and freestanding charter schools making AYP decreased during the same years (53.4 percent to 50.8 percent for the EMOs and 62.2 percent to 58.9 percent for the freestanding charters). (p. 4)

In 2012, Mathematica Policy Research and the University of Washington's Center on Reinventing Public Education conducted a longitudinal study, commissioned by NewSchools Venture Fund, on the effect of 22 CMOs on middle school math achievement. The study utilized a propensity score matching procedure and a statistical regression model to ascertain learning impacts. Furgeson et al. (2013) found that "between 1999 and 2009, the number of CMO schools increased by approximately 20% per year," with "80% of all CMO run schools operat[ing] in Texas, California, Arizona, and Ohio, where the charter law offers moderate to high levels of autonomy" (p. xxii). Additionally, Furgeson et al. (2013) found that "per-pupil expenditures in CMOs varied widely between $5,000 and $20,000 per-pupil each year," (p. xxiii) with the median expenditure being $10,331 and the mean expenditure being $11,193 per student. Furgeson et al. (2013) found that "although overall average two- and three-year test score impacts are positive, they are not statistically significant" (p. 63). Displayed in Table 17 are the correlation analysis results for math and reading for CMOs with two or three years of service.

Table 17

Average Two- and Three-Year CMO Impact on Math and Reading

	Math	Reading
2-year Impact	+0.11	+0.03
3-year Impact	+0.15	+0.05

Note. Adapted from "*Table IV.3. Average CMO Test Score Impacts, by Year After CMO Enrollment"* by Furgeson et al., 2012, *Charter-School Management Organizations: Diverse Strategies and Diverse Student Impacts*, p. 64.

Furgeson et al. (2012) found that "large CMO's are more likely than smaller ones to have positive impacts" (p. 57) and that the learning impact results across the 22 middle schools were mixed, with individual school math impacts ranging from -0.3 to +0.6. Lastly, due to the proliferation of CMOs, the study looked at impact over time. Furgeson et al. (2012) established through their analysis that "reading impacts declined as the CMO adds more schools [and] math impacts do not consistently decline with growth" (p. 58).

Woodworth and Raymond (2013) conducted a study for CREDO that utilized electronic data records to create a matched control for every CMO and EMO networked charter school student, with learning gains being reported in standard deviations as compared to that of traditional public schools (TPS). "Positive standard deviations are expressed as additional days of learning; negative standard deviations are associated with fewer days of learning" (Woodworth & Raymond, 2013, p. 13). Woodworth and Raymond (2013) described a CMO and EMO as follows:

> A CMO network is defined as an organization with at least three schools in which the network operates the schools directly. Alternatively, an EMO network is one which has secured contractual agreements from the governing boards of participating charter schools to operate the schools. (p. 1)

Woodworth and Raymond (2013) declared,"We find bland results for CMOs in the aggregate," (p. 46) but continued that "compared to the aggregate results in the 2009 CREDO report (-0.03 in math and -0.01 in reading), these results show movement in a positive direction" (p. 46). Additionally, Woodworth and Raymond (2013) concluded that "EMOs are the surprise in this analysis – and while the individual EMO results show variations just like the CMOs, they appear to outperform the CMOs, the direct-run

charters and the traditional public school local markets in a consistent fashion" (p. 51). The one-year learning gains are detailed in Table 18 for math and reading for each charter school network model.

Table 18

Annual Average Learning Gains for Charter Schools and TPS

	Math	Reading
CMO vs. TPS	-0.005	+0.005
Non-CMO vs. TPS	-0.012	+0.007
EMO vs. TPS	+0.013	+0.017
Direct-run Independent Charter	-0.014	+0.005

Note. TPS = Traditional Public School. Adapted from "Figure 2: Average One Year Gains in Charter CMOs and Charter Non-CMOs Relative to Traditional Public School Gains" and "Figure 18: Average One Year Growth for EMO Charters and Non-EMO Charters Relative to Traditional Public School Gains" by Woodworth and Raymond, 2013. *Charter School Growth and Replication (Volume 2),* p. 7 and p. 32. Copyright 2013 by Center for Research on Education Outcomes.

When the CMO data were disaggregated by state, Woodworth and Raymond (2013) found that Florida CMOs outperformed Florida non-CMO charters in both reading and math. Florida CMO charter learning gains versus those of their virtual traditional public school were +0.01 standard deviation for both reading and math, whereas Florida non-CMO charter learning gains versus their virtual traditional public schools were -0.01 standard deviation in math and -0.02 standard deviation in reading. This information was not collected or analyzed for Florida EMOs.

Summary

Included in chapter two were a review of literature and research regarding charter schools, charter school models, per-pupil expenditure, and the impact of charter school models on the academic achievement of its students. First, an overview of the school reform movement was provided. The history of charter schools followed as the charter school movement was a direct result of the school reform movement. Third, a summary of the research on per-pupil expenditures was offered. Next, a summary of the research on charter schools academic performance was presented. Lastly, a summary of the research on the not-for-profit and for-profit charter school models was offered. Presented in chapter three are the research design, population and sample, sampling procedure, instrumentation (including measurement and validity and reliability), data collection procedures, data analysis and hypothesis testing, limitations, and a summary, as related to this study on Florida charter schools.

Chapter Three

Methods

The purpose of this study was threefold. The first purpose of the study was to determine if a difference existed between per-pupil expenditure for not-for-profit and for-profit charter schools. An additional focus of the study was to examine the differences in student achievement at the not-for-profit and for-profit charter schools, as measured by state standardized assessments in the areas of reading, math, and science. The final purpose of the study was to determine if there was a difference in the relationship between per-pupil expenditures and academic performance in math, reading, and science for the not-for-profit and for-profit charter schools. The methodology, which includes research design, population and sample, sampling procedure, instrumentation (including measurement and validity and reliability), data collection procedures, data analysis and hypothesis testing, limitations, and a summary, utilized in this study, is presented in this chapter.

Research Design

This study was a non-experimental study that used causal-comparative research methods. Trochim (2001) stated causal-comparative studies are designed to determine whether one or more independent variables affect one or more outcome variables. The variables for this study included the model of charter school (not-for-profit and for-profit), per-pupil expenditures, and the percentage of students scoring satisfactory or higher on the Florida Comprehensive Assessment Test in the areas of reading, math, and science.

Population and Sample

The population for this study was the Florida not-for-profit and for-profit public charter schools that existed during the 2011-2012 through 2013-2014 school years. In this study, the not-for-profit charter school sub-sample included both not-for-profit charter schools and not-for-profit (CMO) charter schools. As stated in chapter one and for the purpose of this study, the not-for-profit model charter schools did not utilize a management company and had no management fees, whereas the not-for-profit (CMO) model charter schools used a management company and had related management fees. The sample did not include additional management models, including municipality managed charter schools and charter schools in the workplace, as well as all private and public schools. Municipality and workplace charters were excluded due to extraordinary differences in per pupil expenditure due to taxes and rent being waived in these organizations. Additionally, charter schools that served students with exceptional needs, which resulted in increased weighted and disproportionate PPE, were excluded. O'Connor (2011) stated that Consoletti, of the Center for Education Reform, referenced that Florida's charter schools tended to be "predominantly based in urban areas" (p. 1), as there was not the same demand for charter schools in Florida's rural counties. As of 2015 and according to the FLDOE (2015) Master List of Schools, 50 of Florida's 67 counties operated a charter school. Of these counties, 22 counties maintained five or fewer operating charter schools. The remaining 28 counties operated 571 of the state's 621 charter schools. The majority of these 28 counties with operating charter school contained high population cities such as Miami, Tampa, St. Petersburg, Daytona Beach, Tallahassee, and Jacksonville, which resulted in the population during the time of the

study being more diverse and not wholly representative of the state demographics, as previously referenced in chapter one.

Sampling Procedures

Homogeneous purposive sampling was used in the current study. As defined by Mugera (2013), homogeneous purposive sampling "aims to achieve a sample whose units share the same characteristics [and] is often chosen when the research question that is being addressed is specific to the characteristics of the particular group of interest, which is subsequently examined in detail" (p. 5). The characteristic that unites this sample as a homogeneous group is the fact that all schools are charter schools in Florida. The sampling included the not-for-profit and for-profit charter school models. To ensure homogeneity in the sample, charter schools had to meet the following purposive criteria:

1. The charter school must have been a state-approved and accredited entity.
2. The charter must be a district-sponsored entity. The sampling excluded additional models, including municipality managed charter schools and charter schools in the workplace
3. The charter school must have had an enrollment of students in a minimum of one tested grade level, which included third through tenth grades.
4. Enrolled and eligible students must have participated and completed all components of the state assessment for the respective grade level in which the students were enrolled.
5. The charter school must have had a minimum of two consecutive years, 2011-12 through 2013-14, of testing and financial data.

6. Charter schools that served students with exceptional needs, which resulted in increased weighted and disproportionate PPE, were excluded.

Instrumentation

This study incorporated the use of the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) results to measure student achievement of the charter school students in Florida from the 2011-2012 through the 2013-2014 school years. For this study, FCAT 2.0 reading, math, and science subject tests were used and were comprised of multiple test item formats. Each subject test consisted of multiple choice (MC) items or a combination of multiple choice and gridded response (GR) items. The specific number and type of items used for each grade level and test component are detailed in Table 19.

Table 19

2011-2014 Florida Comprehensive Assessment Test 2.0 Item Types and Number of Items by Grade and Test Subject Area

	Number of Items on FCAT 2.0			
Grade	Reading MC	Math MC	Math GR	Science MC
3	50-55	50-55	NA	NA
4	50-55	35–40	10–15	NA
5	50-55	35–40	10–15	60-66
6	50-55	35–40	10–15	NA
7	50-55	35–40	10–15	NA
8	50-55	35–40	20–25	60-66
9	50-55	NA	NA	NA
10	50-55	NA	NA	NA

Note. MC = multiple choice. GR = gridded response. NA = not applicable. Adapted from "Number of Items" by the FLDOE, 2011, 2012, and 2013, *Florida Department of Education: FCAT 2.0 Test Design Summaries*, p. 6. Copyright 2011, 2012, and 2013 by the FLDOE.

Each content area assessment was comprehensive in nature and included multiple reporting categories. As determined by the Florida Department of Education (2013), reading achievement consisted of the following reporting categories, as assessed and measured by FCAT 2.0:

> Vocabulary - Students use multiple strategies to determine the meaning of grade-appropriate vocabulary words; Reading Application - Students use a variety of strategies to comprehend text suitable for the grade level; Literary Analysis (Fiction and Nonfiction) - Students identify, analyze, and apply knowledge of the

elements of a variety of literary texts, both fiction and nonfiction; and Informational Text and Research Process - Students comprehend and interpret informational text from a variety of sources. (p. 14)

The mathematical reporting categories for each grade level, as defined by the FLDOE (2013), are summarized as follows:

- Grade 3: Numbers (Operations, Problems, and Statistics); Geometry and Measurement; and Number (Fractions);
- Grade 4: Numbers (Operations and Problems); Geometry and Measurement; and Number (Base 10 and Fractions);
- Grade 5: Number (Base Ten and Fractions); Geometry and Measurement; Expressions, Equations, and Statistics;
- Grade 6: Fractions, Ratios, Proportional Relationships, and Statistics; Expressions and Equations; Geometry and Measurement;
- Grade 7: Geometry and Measurement; Ratios and Proportional Relationships; Number (Base Ten); and Statistics and Probability; and
- Grade 8: Expressions, Equations, and Functions; Geometry and Measurement; Number (Operations, Problems, and Statistics). (p. 2)

As determined by the FLDOE, Science was assessed by the FCAT 2.0 only in grades five and eight. The FLDOE (2013) stated the Science reporting categories as Nature of Science, Earth and Space Science, Physical Science, and Life Science, with the "difficulty of the concepts assessed on the FCAT 2.0 Science progress[ing] systematically from grade 5 to grade 8" (p. 27).

Additionally, the FLDOE (2013) stated that items within each testing subject on the FCAT 2.0 were categorized using a combination of Webb's "depth of knowledge (DOK) and a cognitive classification system" (p. 4) used by the NAEP. The item complexities were categorized as a low, medium, or high. The FLDOE (2013) defined the necessary skills and knowledge to successfully complete low complexity problems as reliant upon "recall and recognition" (p. 4), with medium complexity moving to "more flexible thinking," which may require "informal reasoning or problem solving" (p. 4), and high complexity problems requiring "analysis and abstract reasoning" (p. 4). Detailed in Table 20 are the percentage of points included in each of the categories of test items for each of the test subjects at each grade level.

Table 20

Percentage of Points by Complexity Level for FCAT 2.0 Reading, Math, and Science Assessments

	Complexity		
Grade/Subject	Low	Medium	High
3 Reading	25-35	50-70	5-15
3 Math	25-35	50-70	5-15
4 Reading	20-30	50-70	10-20
4 Math	25-35	50-70	5-15
5 Reading	15-25	50-70	15-25
5 Math	10-20	60-80	10-20
5 Science	10-20	60-80	10-20
6 Reading	15-25	50-70	15-25
6 Math	10-20	60-80	10-20
7 Reading	15-25	50-70	15-25
7 Math	10-20	60-80	10-20
8 Reading	10-20	50-70	20-30
8 Math	10-20	60-80	10-20
8 Science	10-20	60-80	10-20
9 Reading	10-20	50-70	20-30
10 Reading	10-20	50-70	20-30

Note. Adapted from "Table 10: Percentage of Points by Cognitive Complexity Level for FCAT 2.0 Reading Assessments," " Table 11: Percentage of Points by Cognitive Complexity Level for FCAT 2.0 and EOC Mathematics Assessments," and "Table 12: Percentage of Points by Cognitive Complexity Level for FCAT 2.0 and EOC Science Assessments" by the FLDOE, 2011, 2012, and 2013, *Florida Department of Education: FCAT 2.0 Test Design Summaries,* p. 5. Copyright 2011, 2012, and 2013 by the FLDOE.

As seen in Table 20, the FCAT 2.0 had the largest percentage of middle complexity questions for all subjects, with varying percentages of low and high complexity leveled questions. The FLDOE (2013) stated that the use of varying complexity levels on the FCAT 2.0 allowed all items to measure a student's "cognitive demand inherent" to each item and "not on assumptions about the student's approach to the item" (p. 4). The use of the varying levels of complexity increased the overall validity and reliability of the state assessments results, as detailed in the validity and reliability section.

Measurement. In this study, multiple variables were measured. First, per-pupil expenditure (PPE) was determined for every charter school in Florida for academic school years 2011-2012, 2012-2013, and 2013-2014. At the time of this study, PPE was not calculated in Florida for charter schools. To ascertain the PPE for each of Florida's charter schools, the data contained in the mandated state financial audit for each school, specifically the Statement of Revenues, Expenditures, and Change in Fund Balance – Governmental Fund sheet – General Fund Revenue, was used. Within these documents, the annual full-time equivalency (FTE) funds allotted by the FLDOE and based upon student enrollment as determined by the Florida Education Finance Program (FEFP) were collected. Next, management fees were collected from the note section of the annual audits. To verify the management fees, a public records request was submitted to each Florida school district that possessed an operating charter school between the schools years of 2011-2012 and 2013-2014 to obtain charter school contracts and Program Cost Reports from the participating charter schools. The charter school contracts and Program Cost Reports provided and verified management fees assessed directly to the

representative charter schools. The management fees provided in the charter school contracts were compared to the overall expenditures listed in the Program Cost Reports and annual audits to determine if the management fees were expended from Expenditures from the Governmental Fund (General Fund funded by the FTE). If the funds were determined to be allocated from the General Fund funded by the FTE allotment from the FLDOE, the assessed management fees were then subtracted from the FTE allotment made by the FLDOE. The FLDOE (2011) has five survey reporting dates that are used for FTE reporting purposes, which are defined as:

1. Survey Period 1 (July) covers the period from the beginning of the fiscal year (July 1) to the beginning of the defined 180-day school year.
2. Survey Period 2 (October) covers the first 90 days of the 180-day school year.
3. Survey Period 3 (February) covers the second 90 days of the 180- day school year.
4. Survey Period 4 (June) covers the period from the end of the 180-day school program to the end of the fiscal year (June 30). An additional Survey Period, Survey Period 5, covers reporting of prior school year data such as the Advanced Placement, Advanced International Certificate of Education, and International Baccalaureate programs. (p. 1)

The annual calculated FTE funds for each charter school were then divided by the average of the total number of students enrolled at the mandated survey dates in October and February in each charter school within each corresponding 180-day school year. The PPE formula was written as follows:

(AFTEA – AMF)/[(AFTESP2e + AFTESP3e)/2]

The numerator in the equation was defined as the annual FTE allotment minus the annual management fee. The AFTEA is the annual FTE allotment that was distributed by the FLDOE to the local districts, who then, in turn, distributed the funds to the charter schools based on enrollment numbers. The AMF is the annual management fee, which was detailed in the management company contracts and disclosed on annual audits. The annual enrollment figure was the denominator. The FLDOE calculated the annual enrollment figures by using the annual FTE Survey Period 2 enrollment number collected in October, adding it to the annual FTE Survey Period 3 number collected in February, and dividing the sum by 2.

The second, third, and fourth variables that were measured were academic performance in the areas of reading, math, and science for students in Florida charter schools between the school years 2011-2012 and 2013-2014. To measure the academic performance of Florida students in the area of reading, math, and science, the FCAT 2.0 is annually administered to all students in grade 3 through grade 10. As defined by the FLDOE (2013), FCAT 2.0 achievement levels are reported numerically with a range from 1-5, "with Level 1 being the lowest and Level 5 being the highest. To be considered on grade level, students must achieve Level 3 or higher. Level 3 indicates satisfactory performance" (p. 6). The FCAT 2.0 data point used to ascertain the academic performance of the enrolled students for reading was the Reading Percent of Students Scoring Satisfactory or Higher, for math was the Math Percent of Students Scoring Satisfactory or Higher, and for science was the Science Percent of Students Scoring Satisfactory or Higher.

The fifth variable in this study was the charter school model, not-for-profit or for-profit. The classification of the tax status/model for each charter school was provided by the FLDOE via a public records request. For this study, the not-for-profit sub-group included both the not-for-profit and not-for-profit (CMO) charter schools and the for-profit subgroup included all for-profit (EMO) charter schools. As stated in chapter one and for the purpose of this study, the not-for-profit model charter schools did not utilize a management company and had no management fees, whereas the not-for-profit (CMO) model charter schools used a management company and had related management fees. As stated by Miller, the Executive Director of the Florida School Choice Office of Independent Education and Parental Choice (personal communication, March 30, 2016), the not-for-profit, for-profit, and management company relationship data were gleaned from annual accountability reports provided by each charter school to their sponsoring district and then forwarded to the state. Mr. Miller explained that the "annual accountability may or may not be reviewed by the district" and that "it is not verified by the State," which may result in some errors. As such, data may not be wholly accurate.

The following describes the means by which the variable in each research question was measured and with which data.

For RQ1, the independent variable was the charter school model, not-for-profit or for-profit. The two models, not-for-profit and for-profit, were defined by the State, designated by the school, and collected from the FLDOE School Choice Program via a public records request. The dependent variable for this research question was the PPE. This dollar amount was calculated using the formula referenced earlier in this section.

For RQ2, the independent variable was the charter school model, not-for-profit or for-profit. The means by which the not-for-profit and for-profit charter schools were defined and designated and the process used to collect the information was defined in RQ1. The dependent variable measured within this research question was academic performance as measured by FCAT 2.0 reading scores. The FLDOE (2014) explained that the calculation of the percentage of students scoring satisfactory or higher begins at the individual level. The FLDOE (2014) stated that individual FCAT 2.0 score results were

> reported on a vertical scale, also called a developmental score scale, which [was] used to determine a student's annual progress from grade to grade. The FCAT 2.0 Reading developmental score scale range[d] from 140 to 302 across grades 3 through 10. (p. 1)

The vertical scale scores were categorized into individual achievement levels for each tested student, ranging from a low of 1 to a high of 5. The FLDOE (2014) defined the achievement levels as follows:

> Level 1 - Students at this level demonstrate an inadequate level of success with the challenging content of the *Next Generation Sunshine State Standards*.
>
> Level 2 - Students at this level demonstrate a below satisfactory level of success with the challenging content of the *Next Generation Sunshine State Standards*.
>
> Level 3 - Students at this level demonstrate a satisfactory level of success with the challenging content of the *Next Generation Sunshine State Standards*.
>
> Level 4 - Students at this level demonstrate an above satisfactory level of success with the challenging content of the *Next Generation Sunshine State Standards*.

> Level 5 - Students at this level demonstrate mastery of the most challenging content of the *Next Generation Sunshine State Standards*. (p. 1)

The data used to measure the dependent variable was the percentage of tested students scoring at the satisfactory level in reading, Level 3 or higher. According to the FLDOE (2014), the calculation of the percentage of students scoring at the satisfactory level in reading or higher was computed by the FLDOE using "the number of eligible students scoring at or above satisfactory [being] divided by the total number of eligible students who took the FCAT 2.0 reading test" (p. 10).

For RQ3, the independent variable was the charter school model, not-for-profit or for-profit. The means by which the not-for-profit and for-profit charter schools were defined and designated and the process used to collect the information was defined in RQ1. The dependent variable measured within this research question was academic performance as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment. The FLDOE (2014) explained that the individual FCAT 2.0 math score results

> are reported on a vertical scale, also called a developmental score scale, which is used to determine a student's annual progress from grade to grade. The FCAT 2.0 Mathematics developmental score scale ranges from 140 to 298 across grades 3 through 8. (p. 1)

As referenced under reading, math scores were categorized into achievement levels. The data used to measure the dependent variable was the percentage of students scoring at the satisfactory level in math, Level 3 or higher. According to the FLDOE (2014), the percentage of students scoring satisfactory or higher was calculated by

> the number of scores at or above satisfactory for eligible students [being] divided by the total number of scores for eligible students who took a mathematics assessment and for whom a valid score was reported. A score must qualify as a first-time score to be included in the performance and learning gains calculations (aside from banked scores for performance measures). (p. 10)

For RQ4, the independent variable was the charter school model, not-for-profit or for-profit. The means by which the not-for-profit and for-profit charter schools were defined and designated and the process used to collect the information was defined in the explanation of the measurement for RQ1. The dependent variable measured within this research question was academic performance as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment. The FLDOE (2014) explained that the individual FCAT 2.0 science score results

> are reported on a vertical scale, also called a developmental score scale, which is used to determine a student's annual progress from grade to grade. FCAT 2.0 Science is reported on a score scale, which ranges from 140 to 260 for both grades 5 and 8. (p. 1)

As referenced under reading, science scores were categorized into achievement levels. The data used to measure the dependent variable was the percentage of students scoring at the satisfactory level in science, Level 3 or higher. According to the FLDOE (2014), the percentage of students scoring satisfactory or higher was calculated by

> the number of eligible students scoring satisfactory or higher [being] divided by the total number of eligible students who took a state science assessment and for whom a valid score was reported (including banked scores and scores credited

back from alternative schools, ESE schools, and hospital homebound programs). (p. 12)

For RQ5, the independent variable was the charter school model, not-for-profit or for-profit. The means by which the not-for-profit and for-profit charter schools were defined and designated and the process used to collect the information was defined in the explanation of the measurement for RQ1. For this research question, there were multiple dependent variables, including per-pupil expenditure and academic performance for reading, as measured by the FCAT 2.0. The process used to determine PPE was defined in RQ1 and presented in a whole dollar amount. The means by which academic performance for reading was measured was defined in the explanation of the measurement for RQ2 and was presented as a percentage of students scoring at a Level 3 or higher.

For RQ6, the independent variable was the charter school model, not-for-profit or for-profit. The means by which the not-for-profit and for-profit charter schools were defined and designated and the process used to collect the information was defined in the explanation of the measurement for RQ1. For this research question, there were multiple dependent variables, including per-pupil expenditure and academic performance for math, as measured by the FCAT 2.0. The process used to determine PPE was defined in RQ1 and presented in a whole dollar amount. The means by which academic performance for math was measured was defined in the explanation of the measurement for RQ2 and was presented as a percentage of students scoring at a Level 3 or higher.

For RQ7, the independent variable was the charter school model, not-for-profit or for-profit. The means by which the not-for-profit and for-profit charter schools were

defined and designated and the process used to collect the information was defined in the explanation of the measurement for RQ1. For this research question, there were multiple dependent variables, including per-pupil expenditure and academic performance for science, as measured by the FCAT 2.0. The process used to determine PPE was defined in RQ1 and presented in a whole dollar amount. The means by which academic performance for science was measured was defined in the explanation of the measurement for RQ2 and was presented as a percentage of students scoring at a Level 3 or higher.

Validity and reliability. Johnson and Christensen (2008) defined validity as the accuracy of the inferences, interpretations, or actions made based on test scores. Reliability refers to the consistency or stability of a set of scores (Johnson and Christensen, 2008). The validity and reliability of the FCAT are described below.

The FCAT 2.0 has been used by schools throughout Florida to measure student achievement of the necessary knowledge and skills described in the Florida state standards. As validity cannot be directly seen, but only interpreted and evidenced through data results of a test, the FLDOE (2007) has established the validity of the FCAT using multiple pieces of evidence, including content-related evidence and criterion-related evidence. Each piece of evidence has been defined and data provided to evidence the validity of this instrument.

Content-related evidence of validity, as defined by the FLDOE (2007) refers to the degree to which an assessment or assessment instrument aligns to the measure the content for which it was designed. In the case of this study, content-related evidence of validity refers to how well the questions on the FCAT in the areas or reading, math, and

science align to the Florida state standards. As stated by the FLDOE (2007), "to ensure high content validity of the FCAT, the Department of Education" (p. 40) implemented these steps for all FCAT items:

1. Item specifications were written.
2. Test items were written according to the guidelines provided by the item specifications.
3. The tests were carefully constructed with items that met specific psychometric standards.
4. The items were pilot tested using randomly selected groups of students at appropriate grade levels.
5. The items were field tested to determine their psychometric properties.
6. The constructed tests were equated to the base test to match both content coverage and test statistics. (p. 40)

To provide evidence of criterion-related validity for the FCAT, a correlation of concurrent validity comparisons of test performance data between the FCAT and the Stanford 9 was calculated. The FLDOE (2007) explained that the scores of the criterion-referenced questions of the FCAT were correlated and compared with the norm-referenced portion of the Stanford 9, which was regularly used throughout Florida. Stockburger (2015) described correlation coefficients as providing an index of a positive or negative directional relationship, as identified with positive or negative numbers ranging from -1.0 to +1.0. Stockburger explained, "A positive correlation coefficient means that as the value of one variable increases, the value of the other variable increases. A negative correlation coefficient indicates that as one variable increases, the

other decreases, and vice-versa" (p. 1). Stockburger (2015) added that a correlation coefficient of zero ($r = 0.0$) indicated the absence of a linear relationship while a perfect and strong relationship was represented with correlation coefficients of $r = +1.0$ and $r = -1.0$. The data in Table 21 provides evidence for the concurrent validity of the FCAT, as evidenced by strong positive correlations of FCAT test scores with those from the Stanford 9.

Table 21

Concurrent Validity of the Florida Comprehensive Assessment Test and the Stanford 9

Grade	Reading	Math
3	.84	.84
4	.83	.82
5	.83	.84
6	.83	.83
7	.83	.83
8	.82	.84
9	.79	.83
10	.80	.76

Note: Adapted from "Table 3: Correlations Between the FCAT SSS and the NRT Tests" by the FLDOE, 2004, *Assessment and Accountability Briefing Book: FCAT School Accountability*, p. 27. Copyright 2004 by the FLDOE.

In determining the reliability of a test, the FLDOE (2004) stated there are "four kinds of reliability coefficients used in relation to the FCAT" (p. 24). These are internal consistency, test-retest reliability, interrater reliability, and reliability of classification coefficients. Additionally, there are several indices to measure a reliability coefficient.

To determine the reliability coefficient, a test/measuring instrument is used to assess the same population twice to calculate the accuracy and correlation between the two respective sets of data. The FLDOE (2004) reported that two methods were utilized to report internal consistency reliabilities for the FCAT, including Cronbach's alpha and Item Response Theory (IRT) marginal reliabilities. Wells and Wollack (2003) defined Cronbach's alpha as measuring the "extent to which the items on a test, each of which could be thought of as a mini-test, provide consistent information about students' mastery of the domain" (p. 4). In defining Cronbach's alpha score ranges, Wells and Wollack (2003) explained, "Cronbach's alpha ranges from 0 to 1.00, with values close to 1.00 indicating high consistency. Professionally developed high-stakes standardized tests should have internal consistency coefficients of at least .90" (p. 5). As defined by the FLDOE (2004), the IRT reliability coefficient is used in the same manner as Cronbach's alpha, as it measures marginal reliabilities that represent the "variability of test scores for a specific group of examinees" (p. 26). The coefficients presented in Table 22 provide strong evidence for the reliability of the FCAT reading and math assessments as evidenced by the Cronbach's alpha and IRT coefficients. As stated by the FLDOE (2007), "the evidence of reliability and validity support[s] the claim that the FCAT is technically sound and meet[s] or exceed[s] the professional standards for standardized achievement tests" (p. 41).

Table 22

Florida Comprehensive Assessment Test Internal Consistency Reliability Using Cronbach's Alpha and IRT

	Reading		Math	
Grade	Cronbach's Alpha	IRT	Cronbach's Alpha	IRT
3	.91	.91	.88	.88
4	.90	.91	.88	.88
5	.90	.90	.92	,93
6	.89	.90	.87	.87
7	.91	.91	.89	.89
8	.89	.90	.93	.93
9	.89	.89	.89	.90
10	.89	.89	.92	.92

Note: Adapted from "Table 1: Classic Reliability of FCAT" by the FLDOE, 2004, *Assessment and Accountability Briefing Book: FCAT School Accountability*, p. 25. Copyright 2004 by the FLDOE.

Data Collection Procedures

A quantitative methodology of data collection was employed in this study. As the data that was utilized for the study was public data that was accessible via the FLDOE website and via public records requests, the FLDOE granted verbal permission for data collection via the website and inferred written consent through the provision of data via the public records requests. Additionally, the FLDOE requested a completed copy of the IRB (see Appendix D), which was approved by Baker University (see Appendix E). Data for related FCAT 2.0 scores in reading, math, and science for school years 2011-2012 through 2013-2014 were collected in a single phase from the FLDOE website, saved to

Microsoft Excel spreadsheets, and then transferred electronically into IBM® SPSS® Statistics Faculty Pack 23 for Windows for analysis via Microsoft 2007 Excel Spreadsheets. Student confidentiality and anonymity was maintained throughout the process, as data were collected at the building level and never involved identifiable student data.

As part of Phase I, the FCAT 2.0 data were collected and sorted by county, school, grade levels served, and not-for-profit and for-profit charter school models. Charter schools were screened based on the following purposive criteria: 1) the charter school must have been a state approved and accredited entity, 2) the charter school must be a district-sponsored charter school 3) the charter school must have had an enrollment of students in a minimum of one tested grade level, which included third through tenth grades, and 4) enrolled students must have participated and completed all components of the state assessment for the respective grade level in which the student was enrolled. Additionally, during Phase I, financial data were collected. At the time of this study, PPE was not calculated in Florida for charter schools. To ascertain the PPE for each of Florida's charter schools, the researcher used data contained in the mandated state financial audit for each school, specifically the Statement of Revenues, Expenditures, and Change in Fund Balance – Governmental Fund sheet – General Fund Revenue and Notes to Financial Statements. Within these documents, the annual full-time equivalency (FTE) funds allotted by the FLDOE and based upon student enrollment as determined by the Florida Education Finance Program (FEFP) were collected. Next, a public records request was made to each charter school that was in operation during the 2011-2012 through 2013-2014 to obtain charter management company contracts and Program Cost

Reports to verify from where the applicable management funds were being expended. Additional merging, cleaning, and organization of data were completed for processing via Microsoft Excel. These steps prepared data for Phase II.

Phase II of the data collection resulted in the removal of schools based on lack of longitudinal data and/or loss of accreditation. As previously stated, the fourth purposive criterion was the fact that the charter school must have had two consecutive years of testing and financial data. Schools with one year of longitudinal data were eliminated from the sample. Financial data were used to calculate per-pupil expenditure for the remaining schools in the sample. All remaining data were transferred from Excel files to IBM® SPSS® Statistics Faculty Pack 23 for Windows for data analysis and hypothesis testing.

Data Analysis and Hypothesis Testing

This study employed seven research questions (RQ) and subsequent research hypotheses (H), which are detailed below. The research questions and hypotheses are followed by the methods used to test each hypothesis.

RQ1. To what extent is there a difference in per-pupil expenditures (PPE) between the not-for-profit and for-profit charter schools in Florida?

H1. There is a significant difference in per-pupil expenditures between the not-for-profit and for-profit charter schools in Florida.

A two-sample *t* test was conducted to address RQ1. Due to possible differences in the sample sizes and disparate variances for the not-for-profit and for-profit sub-samples and PPE, a Levene's test for equality of variances was conducted to ascertain the possible need for the use of a Welch's *t* test instead of an independent samples *t* test. The PPE

means were compared for the not-for-profit and for-profit charter schools. The level of significance was set at .05.

RQ2. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT in reading, between the not-for-profit and for-profit charter schools in Florida?

H2. There is a significant difference in academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in reading, between the not-for-profit and for-profit charter schools in Florida.

A two-sample *t* test was conducted to address RQ2. Due to possible differences in the sample sizes and disparate variances for the not-for-profit and for-profit sub-samples and PPE, a Levene's test for equality of variances was conducted to ascertain the possible need for the use of a Welch's *t* test instead of an independent samples *t* test. The two sample means for the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessment were compared for the not-for-profit and for-profit charter schools. The level of significance was set at .05.

RQ3. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT in math, between the not-for-profit and for-profit charter schools in Florida?

H3. There is a significant difference in academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in math, between the not-for-profit and for-profit charter schools in Florida.

A two-sample *t* test was conducted to address RQ3. Due to possible differences in the sample sizes and disparate variances for the not-for-profit and for-profit sub-samples

and PPE, a Levene's test for equality of variances was conducted to ascertain the possible need for the use of a Welch's *t* test instead of an independent samples *t* test. The two sample means for the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment were compared for the not-for-profit and for-profit charter schools. The level of significance was set at .05.

RQ4. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT in science, between the not-for-profit and for-profit charter schools in Florida?

H4. There is a significant difference in academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in science, between the not-for-profit and for-profit charter schools in Florida.

A two-sample *t* test was conducted to address RQ4. Due to possible differences in the sample sizes and disparate variances for the not-for-profit and for-profit sub-samples and PPE, a Levene's test for equality of variances was conducted to ascertain the possible need for the use of a Welch's *t* test instead of an independent samples *t* test. The two sample means for the percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment were compared for the not-for-profit and for-profit charter schools. The level of significance was set at .05.

RQ5. To what extent is there a difference in the relationship between the per-pupil expenditures and students' academic performance, as measured by the FCAT in reading, between the not-for-profit and for-profit charter schools in Florida?

H5. There is a difference in the relationship between the per-pupil expenditure and student academic performance, as measured by the FCAT 2.0 reading assessment, for the not-for-profit and for-profit charter schools in Florida.

Before conducting testing for RQ5, the data were disaggregated by model type, not-for-profit and for-profit. Next, a Pearson correlation coefficient was calculated for each sub-sample, the not-for-profit and for-profit charter schools. The Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the two factors, per-pupil expenditure and student reading achievement. The level of significance was set at .05. As recommended by McDonald (2014), a Fisher's *z* test was conducted. The test determined if the correlations were similar or different for the not-for-profit and for-profit charter schools. The level of significance was set at .05.

RQ6. To what extent is there a difference in the relationship between the per-pupil expenditures and students' academic performance, as measured by FCAT in math, between the not-for-profit and for-profit charter schools in Florida?

H6. There is a difference in the relationship between the per-pupil expenditure and students' academic performance, as measured by the FCAT 2.0 in math, for the not-for-profit and for-profit charter schools in of Florida.

Before conducting testing for RQ6, the data were disaggregated by model type, not-for-profit and for-profit. Next, a Pearson correlation coefficient was calculated for each sub-sample, for the not-for-profit and for-profit charter schools. The Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the two factors, per-pupil expenditure and student math

achievement. The level of significance was set at .05. As recommended by McDonald (2014), a Fisher's *z* test was conducted. The test determined if the correlations were similar or different for the not-for-profit and for-profit charter schools. The level of significance was set at .05.

RQ7. To what extent is there a difference in the relationship between the per-pupil expenditure and students' academic performance, as measured by the FCAT in science, between the not-for-profit and for-profit charter schools in Florida?

H7. There is a difference in the relationship between the per-pupil expenditure and student academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in science, for the not-for-profit and for-profit charter schools in Florida.

Before conducting testing for RQ7, the data were disaggregated by model type, not-for-profit and for-profit. Next, a Pearson correlation coefficient was calculated for each sub-sample, for the not-for-profit and for-profit charter schools. The Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the two factors, per-pupil expenditure and student math achievement. The level of significance was set at .05. As recommended by McDonald (2014), a Fisher's *z* test was conducted. The test determined if the correlations are similar or different for the not-for-profit and for-profit charter schools. The level of significance was set at .05.

Limitations

As defined by Lunenburg and Irby (2008), limitations are factors that may affect the interpretation of results or the ability to generalize findings to a broader community.

These factors are not under the control of the researcher. The study has the following limitations:

1. The number of students enrolled could be limited by the numbers of charter schools allowed under local charter school policy, as well as the number of students allowed to participate in the Student Choice program and subsequent enrollment in a charter school due to state-required lotteries for seats within each school.
2. As many states have done, due to the adoption of the Common Core Standards, Florida modified its state curriculum and subsequently its state assessments. According to the FLDOE (2014), in 2010 Florida adopted the Next Generation Sunshine State Standards. Additionally in 2011, Florida moved from the Florida Comprehensive Assessment Test, which measured the learning and application of knowledge and skills from the original Sunshine State Standards to the Florida Comprehensive Assessment Test 2.0 that measured learning and application of knowledge and skills from the Next Generation Sunshine State Standards. These changes could limit the generalization of the findings to charter schools outside of Florida due to the fidelity to which these transitions occurred within each educational setting.
3. Due to the subjective manner in which the enrollment process for charter schools occurs, there are concerns regarding equitable access to the program. However, as previously stated, the program is available, yet contingent upon lottery acceptance, to all interested families at no additional cost.

4. All charter schools are required to file an annual audit in compliance with the accepted audit standards, the Government Auditing Standards issued by the Comptroller General of the United States, and by the provisions of the Florida Auditor General – Chapter 10.850. However, these standards allowed for the use of estimations and approximations. The use of estimations and approximation created an arena in which the figures obtained from the annual audits posted to the Florida Auditor General's website may not be wholly accurate.
5. As stated by Bryant (2015), a "recent state audit found [specific] charters didn't keep accurate counts of the number of students enrolled in the schools" (p.12). As such, the enrollment numbers and subsequent financial figures used within the study for specified charters may not be wholly accurate.
6. Other extraneous variables beyond the control of the researcher could influence student achievement of FCAT 2.0-tested student (grades 3-10) in Florida. These variables may include inequities in parental involvement and support, the recent economic crisis and its impact on parental availability and involvement, participation in varying district's summer schooling and activities, and private tutoring

Summary

This chapter began with a restatement of the purpose of this causal-comparative study. The participants were defined as a homogenous purposive sample from Florida, for which demographic data were provided. The selection process of the sample was defined using specified purposive criteria. Additionally, psychometric information about

the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) was detailed. Validity and reliability of the instruments were presented, with each instrument proving valid and reliable. The data collection process was specified from Florida State Department of Education approval for collection through the single phase of data retrieval and two phases of cleaning. The data analysis was described as using inferential statistics, more specifically using a combination of independent samples *t* tests, Pearson correlation coefficients, and Fisher *z* tests, to test the hypotheses. The data analysis was followed by the limitations of the study. Included in the next chapter are the descriptive statistics and the presentation of the results of the data analysis.

Chapter Four

Results

As stated in chapter one, there were three purposes for this research study. The first purpose of the study was to determine if there was a significant difference in the per-pupil expenditure between the two different models of charter schools in Florida, the not-for-profit and the for-profit charter schools. The second purpose of this study was to ascertain if there was a significant difference in the academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in the content areas of reading, math, and science, between not-for-profit and for-profit charter schools. The third purpose of the study was to determine whether there was a difference in the relationship between per-pupil expenditures and academic performance in math, reading, and science between the not-for-profit and for-profit charter schools. Chapter four includes the descriptive statistics, hypotheses testing, additional analyses, and a summary.

Descriptive Statistics

The population for this study was the Florida charter schools operated between the 2011-2012 and 2013-2014 school years. The FLDOE, through a public records request, provided data on the number of Florida charters school, enrollment, management company affiliation, not-for-profit or for-profit status, and primary contact information for each of the years of the study. After applying the previously mentioned purposive criteria, the population was reduced to the sample. Data that details and compares the number of not-for-profit, not-for-profit (CMO), and for-profit charter schools used in the sample are displayed in Table 23.

Table 23

Number of Charter Schools by Model for Study Sample

Year	2011-2012	2012-2013	2013-2014
NFP	210	221	211
NFP (CMO)	23	22	24
FP (EMO)	138	181	178
Total	371	424	413

Note. NFP = Not-for-profit. NFP (CMO) = Not-for-profit (CMO). FP (EMO) = For-profit (EMO).

The sample for this study represented 70.27% of the total population of charter schools in Florida (N = 1719) at the time of the study. The cumulative sample for the years 2011-2012 through 2013-2014 was comprised of 53.15% not-for-profit, 5.71% not-for-profit (CMO), and 41.14% for-profit (EMO) charter schools. The data in Table 23 shows an overall increase of one not-for-profit charter school in the sample over the three-year period. Not-for-profit (CMO) charter schools had an overall increase of one school in the sample over the same period, with the for-profit charter schools having an increase of 40 schools or a change of 28.99% in the for-profit sample size.

As stated by Melton (2015), "the primary basis for education funding is student enrollment" (p. 2). Because PPE is a primary variable within this study, student enrollment, which drives Florida education funding is described and compared for the not-for-profit and for-profit charter schools. Provided in Table 24 are an overview of the total, average, and range of enrollment numbers in Florida charter schools, along with a disaggregation of the enrollment by charter school model for the school years 2011-2012 through 2013-2014.

Table 24

Total, Average, and Range of Enrollment for Florida Charter School Sample

Enrollment	All	NFP	NFP (CMO)	FP (EMO)
Total				
2011-2012	150, 911	74,792	13,455	62,664
2012-2013	174,741	81,242	12,492	81,007
2013-2014	183,150	81,354	13,577	88,219
Average				
2011-2012	397	351	585	441
2012-2013	407	365	543	443
2013-2014	432	380	543	485
Range				
2011-2012	18-2,246	19-2,246	50-1,007	18-1,940
2012-2013	20-2,488	37-2,488	63-1,104	20-2,056
2013-2014	23-2,674	29-2,674	150-1,013	23-2,212

Note. NFP = Not-for-profit. NFP (CMO) = Not-for-profit (CMO). FP (EMO) = For-profit (EMO).

In analyzing total enrollment for this sample, the fastest growing sub-group over the three-year period of the study was the for-profit (EMO), with an increase of 40.78% as compared to 21.36% for all charter schools. Additionally, the for-profit (EMO) charter schools have the largest average enrollment growth of 9.98%, as compared to 8.82% growth in average enrollment for all charter schools and 8.26% growth for the not-for-profit schools.

Utilizing the IBM® SPSS® Statistics Faculty Pack 23 for Windows, descriptive statistics for the not-for-profit, not-for-profit (CMO), and for-profit charter schools were

calculated. The descriptive statistics for the three sub-groups were computed due to the FLDOE reporting sub-groups within the not-for-profit model. The not-for-profit model sub-groups included the not-for-profit sub-group that did not utilize and management company and had no management fees and the not-for-profit (CMO) sub-group, which used a management company and had related fees. The descriptive statistics for each group are based upon the cumulative three-year period of data. The following tables detail the cumulative average comparisons for total enrollment; FCAT 2.0 results in reading, math, and science; management fees; and PPE for the not-for-profit, not-for-profit (CMO), and for-profit charter schools.

As seen in Table 25, the not-for-profit charter schools had the largest sample, with 642 schools. However, the not-for-profit (CMO) charter schools had a much higher cumulative average student enrollment as compared the not-for-profit and for-profit charter schools, with 566 students or nearly 100 more students than did the for-profit charter schools and nearly 200 more students than did the not-for-profit charter schools.

Table 25

Descriptive Statistics for Sample: Number of Schools and Student Enrollment from 2011-2012 through 2013-2014 School Years

Model	*N*	Minimum	Maximum	*M*	*SD*
NFP	642	19	2,674	367.42	368.065
NFP (CMO)	69	50	1,104	566.49	269.705
FP	500	18	2,212	459.62	358.809
Total	1,211	18	2,674	416.83	363.700

Note. *N* = Number of schools. *M* = Mean. *SD* = Standard deviation. NFP = Not-for-profit. FP = For-profit. Minimum = Minimum number of students. Maximum = Maximum number of students. Mean = Mean number of students

Detailed in Tables 26, 27, and 28 respectively are the number, mean, and standard deviation regarding the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments for the sample and different charter school models. As displayed in Table 26, the not-for-profit charter schools had the highest percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessment, outperforming the not-for-profit (CMO) and for-profit charter schools by 6.81% and 1.29%, respectively. The not-for-profit charter schools were the only subgroup to score above the cumulative mean score of 57.89%. The not-for-profit (CMO) and for-profit subgroups scored below the cumulative mean score by 5.89% and 0.37%, respectively.

Table 26

Descriptive Statistics for Percentage of Students Scoring Satisfactory or Higher on the FCAT 2.0 Reading Assessment by Sample and Model

Model	*N*	*M*	*SD*
NFP	639	58.81	21.781
NFP (CMO)	68	52.00	23.611
FP	497	57.52	22.488
Total	1,204	57.89	22.218

Note. *N* = Number of schools. *M* = Mean. *SD* = Standard deviation. NFP = Not-for-profit. CMO = Charter management organization. FP = For-profit.

The number, mean, and standard deviation regarding the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment for the sample and different charter school models are included in Table 27. The for-profit charter schools had the highest percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment, outperforming the not-for-profit and not-for-profit (CMO) by 1.35% and 8.97%. The for-profit charter schools were the only subgroup to score above the cumulative mean math score of 57.30%. The not-for-profit (CMO) had the lowest percentage of students scoring satisfactory or higher, with the not-for-profit and the not-for-profit (CMO) subgroups scoring below the cumulative mean math score by 0.11% and 7.73%, respectively.

Table 27

Descriptive Statistics for Percentage of Students Scoring Satisfactory or Higher on the FCAT 2.0 Math Assessment by Sample and Model

Model	*N*	*M*	*SD*
NFP	635	57.19	22.877
NFP (CMO)	69	49.57	21.319
FP	490	58.54	22.068
Total	1,194	57.30	22.534

Note. *N* = Number of schools. *M* = Mean. *SD* = Standard deviation. NFP = Not-for-profit. CMO = Charter management organization. FP = For-profit.

Detailed in Table 28 are the number, mean, and standard deviation regarding the percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment for the sample and different charter school models. The for-profit charter schools had the highest percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment, outperforming the not-for-profit and not-for-profit (CMO) subgroups by 2.24% and 7.82%, respectively. The for-profit charter schools are the only subgroup to score above the cumulative mean science score. Additionally, the not-for-profit (CMO) schools had the lowest percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment, with both the not-for-profit and not-for-profit (CMO) subgroups scoring below the cumulative mean science score by 0.58% and 6.16%, respectively.

Table 28

Descriptive Statistics for Percentage of Students Scoring Satisfactory or Higher on the FCAT 2.0 Science Assessment by Sample and Model

Model	*N*	*M*	*SD*
NFP	589	50.42	23.605
NFP (CMO)	64	44.84	19.834
FP	446	52.66	21.651
Total	1,099	51.00	22.681

Note. *N* = Number of schools. *M* = Mean. *SD* = Standard deviation. NFP = Not-for-profit. CMO = Charter management organization. FP = For-profit.

As management fees were used to calculate PPE, Tables 29 and 30 include the number, minimum, maximum, mean, and standard deviations for the management fees and PPE for the sample and the different charter school models. As seen in Table 29, the not-for-profit (CMO) charter schools had a higher annual management fee of nearly $220,000, as compared to the for-profit charter schools. Additionally, the for-profit charter schools had a higher maximum management fee, as compared to the not-for-profit (CMO) charter schools. The maximum total annual management fee charged by a for-profit company was almost $1.85M more than the maximum total management fee assessed to a not-for-profit charter (CMO) charter school, as the for-profit charter schools had a much larger sample size. Since not-for-profit charter schools do not have a management company relationship, there are no corresponding management fees. Additionally, several management companies waived annual fees due to a charter school's inability to provide the negotiated payment amount without it interfering with the daily operation of the school. As the majority of revenue was provided through state

funding, the primary reason for not being able to make payment to a management company was insufficient student enrollment.

Table 29

Descriptive Statistics for Management Fees by Sample and Model

Model	*N*	Minimum	Maximum	*M*	*SD*
NFP	0	$0	$0	$0	$0
NFP (CMO)	69	$22,500	$1,334,427	$520,888	$303,557
FP	499	$8,000	$3,180,439	$300,907	$338,137
All	568	$0	$3,180,439	$327,630	$341,536

Note. *N* = Number. *M* = Mean. *SD* = Standard deviation. NFP = Not-for-profit. CMO = Charter management organization. FP = For-profit.

The data provided in Table 30 establish that the not-for-profit charter schools had a higher PPE, with both the not-for-profit CMO and for-profit charter schools spending less on PPE. Not-for-profit schools annually spent on average an additional $756-$853 more per student than did the not-for-profit (CMO) and for-profit charter schools. The increased spending by the not-for-profit (CMO) charter schools equated to 12.34%-13.93% more spending per pupil than was spent per student in the not-for-profit (CMO) and for-profit charter school.

Table 30

Descriptive Statistics for PPE by Sample and Model

Model	*N*	*M*	*SD*
NFP	641	$6,130.34	$848.55
NFP (CMO)	69	$5,276.58	$844.96
FP	500	$5,373.56	$848.60
Total	1,210	$5,768.93	$930.74

Note. *N* = Number of schools. *M* = Mean. *SD* = Standard deviation. NFP = Not-for-profit. FP = For-profit

As evidenced in Table 29, data indicated that the not-for-profit (CMO) charter schools had the largest average management fee, with Table 30 providing data indicating that the not-for-profit (CMO) charter schools had the lowest average PPE. Additionally, the analysis of the data in Table 29 indicates that the for-profit charter schools had a lower average management fee as compared to that of the not-for-profit (CMO) charter schools, yet did not have a different PPE as indicated in Table 30. Additional analysis was calculated to determine what percentage of the overall FEFP allotment that was collected as management fees. The annual collective FEFP allotment, the annual collective management fee, and the average annual percent of management fees assessed are detailed in Table 31. The not-for-profit (CMO) charter schools had a higher annual and overall percentage of the FEFP allocated to pay for the annual fees, as compared to that of the for-profit charter schools. In total, the charter schools with management companies collected a total of $187,345,220, or 11.40% of the state-provided FEFP allotment over the three-year period of the study.

Table 31

Annual Cumulative Management Fee as a Percentage of the Annual Cumulative FEFP

	2011-2012	2012-2013	2013-2014	Total
NFP (CMO)				
FEFP	$81,053,537	$76,625,629	$87,791,772	$245,470,938
Mgt. Fee	$11,509,464	$10,979,804	$13,760,349	$36,249,617
Percent	14.20	14.33	15.67	14.77
FP				
FEFP	$368,049,792	$476,027,119	$553,387,565	$1,397,464,476
Mgt. Fee	$38,967,515	$50,461,078	$61,667,010	$151,095,603
Percent	10.59	10.60	11.14	10.81

Note. NFP = Not-for-profit. CMO = Charter management company. FP = For-profit. FEFP = Florida Education Finance Plan (allotment).

In summary and as detailed in tables 26, 27, and 28, the not-for-profit charter schools had more students scoring satisfactory or higher in reading, than did not-for-profit (CMO) and for-profit charter schools. In the content areas of math and science, the for-profit charter schools had more students scoring satisfactory or higher than did the not-for-profit and not-for-profit (CMO) charter schools. The not-for-profit (CMO) charter schools had the lowest percentage of students scoring satisfactory or higher in reading, math, and science. Additionally, as detailed in tables 29, 30, and 31, the not-for-profit (CMO) charter schools had the highest average management fee, lowest PPE, and a higher percentage of the FEFP allotment being allocated for management fees. The following section details the results of the hypothesis testing, which involved quantitative analysis of PPE; the percentage of students scoring satisfactory or higher FCAT 2.0

reading, math, and science assessments; as well as the correlation results for PPE and the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments

Hypothesis Testing

Data from Microsoft Excel spreadsheets was uploaded to IBM® SPSS® Statistics Faculty Pack 23 for Windows for analysis. Two sample *t* tests were conducted to test H1-H4. Pearson product moment correlation coefficients were calculated to index the strength and direction of the relationships defined in H5-H7. Fischer's *z* tests were performed to determine the extent of the difference in the correlation between the not-for-profit and for-profit charter schools.

RQ1. To what extent is there a difference in per-pupil expenditures (PPE) between the not-for-profit and for-profit charter schools in Florida?

H1. There is a significant difference in per-pupil expenditures between the not-for-profit and for-profit charter schools in Florida.

Hypothesis testing for RQ1 included a two-sample *t* test with the mean PPE for the not-for-profit and for-profit charter schools being compared to ascertain the extent of the difference in annual PPE. Due to possible differences in the sample sizes and disparate variances for the not-for-profit and for-profit sub-samples, a Levene's test for equality of variances was conducted to verify the possible need for the use of a Welch's *t* test instead of an independent samples *t* test. Because the Levene's test for equality of variance resulted in a *p*-value of .396 and the standard deviations for the two subgroups were not found to be significantly different, it was determined that the results of the independent samples *t* test could be utilized. The results indicated a statistically

significant difference between the two means, t = -13.267, df = 1208, p = 0.000. The sample mean for not-for-profit charter schools (M = $6,047.37, SD = $884.58, n = 710) was higher than the sample mean for the for-profit charter schools (M = $5,373.56, SD = $848.60, n = 500). On average, the not-for-profit charter schools spent more per pupil than did the for-profit charter schools.

RQ2. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0 in reading, between the not-for-profit and for-profit charter schools in Florida?

H2. There is a significant difference in academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in reading, between the not-for-profit and for-profit charter schools in Florida.

Hypothesis testing for RQ2 employed a two-sample t test. The not-for-profit and for-profit charter school mean percentage of students scoring satisfactory of higher on the FCAT 2.0 reading assessment were compared to determine the extent of the difference in the percentage of students scoring satisfactory or higher. Due to possible differences in the sample sizes and disparate variances for the not-for-profit and for-profit sub-samples, a Levene's test for equality of variance was conducted to ascertain the possible need for the use of a Welch's t test instead of an independent samples t test. Because the Levene's test for equality of variances resulted in a p-value of .504 and the difference between the standard deviations for the two subgroups was not found to be statistically significant, it was determined the results of the independent samples t test could be utilized. The results of the independent samples t test, t = -.488, df = 1202, p = 0.626, indicated the difference between the two means was not statistically significant. Although the sample

mean for not-for-profit charter schools (M = 58.15, SD = 22.038, n = 707) was higher than the sample mean for the for-profit charter schools (M = 57.52, SD = 22.488, n = 497), the difference was not significant. On average, there was not a significant difference between the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessment between the not-for-profit and for-profit charter schools.

RQ3. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0 in math, between the not-for-profit and for-profit charter schools in Florida?

H3. There is a significant difference in academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in math, between the not-for-profit and for-profit charter schools in Florida.

A two-sample *t* test, with a comparison of the mean percentage of students scoring satisfactory or high on the FCAT 2.0 math assessment, was used to determine the extent of the difference in the percentage of students scoring satisfactory of higher for the not-for-profit and for-profit charter schools. Due to possible differences in the sample sizes and disparate variances for the not-for-profit and for-profit sub-samples, a Levene's test for equality of variance was conducted to ascertain the possible need for the use of a Welch's *t* test instead of an independent samples *t* test. As the Levene's test for equality of variances had a *p*-value of .478 and the difference between the standard deviations for the two subgroups was not found to be statistically significant, it was determined that the results of the independent samples *t* test would be utilized. The results of the independent samples *t* test, $t = 1.583$, $df = 1192$, $p = 0.114$, indicated the difference between the two means not to be significantly different. Although the sample mean for not-for-profit

charter schools (M = 56.44, SD = 22.829, n=704) was lower than the sample mean for the for-profit charter schools (M = 58.54, SD = 22.068, n=490), the difference was not significant. On average, there was not a difference between the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment between the not-for-profit and for-profit charter schools.

RQ4. To what extent is there a difference in academic performance, as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0 in science, between the not-for-profit and for-profit charter schools in Florida?

H4. There is a significant difference in academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in science, between the not-for-profit and for-profit charter schools in Florida.

To measure the extent of the difference in the percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment, a two-sample t test was utilized along with a comparison of the means for the not-for-profit and for-profit models. Due to possible differences in the sample sizes and disparate variances for the not-for-profit and for-profit sub-samples, a Levene's test for equality of variances was conducted to ascertain the possible need for the use of a Welch's t test instead of an independent samples t test. As the Levene's test for equality of variances had a p-value of .085 and the difference between the standard deviations for the two subgroups was not found to be statistically significant, it was determined that the results of the independent samples t test would be utilized. The results of the independent samples t test, t = 2.005, df = 1097, p = 0.045, indicated the difference between the two values was statistically significantly. The sample mean for not-for-profit charter schools (M = 49.87, SD = 23.308, n=653) was

lower than the sample mean for the for-profit charter schools (M = 52.66, SD = 21.651, n=446). On average, the for-profit charter school had a significantly higher percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment than did the not-for-profit charter schools.

RQ5. To what extent is there a difference in the relationship between the per-pupil expenditures and students' academic performance, as measured by the FCAT 2.0 in reading, between the not-for-profit and for-profit charter schools in Florida?

H5. There is a difference in the relationship between the per-pupil expenditure and student academic performance, as measured by the FCAT 2.0 reading assessment, for the not-for-profit and for-profit charter schools in Florida.

Before conducting the data analysis, the sample was disaggregated into two groups: not-for-profit and for-profit charter schools. A Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the per-pupil expenditure and student reading achievement for the not-for-profit charter schools. A Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the per-pupil expenditure and student reading achievement for the for-profit charter schools. To determine the extent of the difference in the correlation for the not-for-profit and for-profit charter schools, a Fisher's z test was performed. The two sample correlations were compared, with the level of significance set at .05.

The correlation coefficient (r = 0.135) provided evidence for a moderately weak positive relationship between not-for-profit charter school per-pupil expenditure and reading achievement. The correlation coefficient (r = 0.181) provided evidence for a

moderately weak positive relationship between for-profit charter school per-pupil expenditure and for-profit charter school reading achievement. The results of the Fisher's *z* test for two correlations indicated there was not a statistically significant difference between the two values, $z = .80$, $p = .420$. The correlation for not-for-profit schools was slightly weaker but not significantly different from the correlation for for-profit schools. The relationship between PPE and the percentage of students scoring at a satisfactory level or higher on the FCAT 2.0 reading assessment was not affected by the not-for-profit or for-profit status charter school models.

RQ6. To what extent is there a difference in the relationship between the per-pupil expenditures and students' academic performance, as measured by FCAT 2.0 in math, between the not-for-profit and for-profit charter schools in Florida?

H6. There is a difference in the relationship between the per-pupil expenditure and students' academic performance, as measured by the FCAT 2.0 in math, for the not-for-profit and for-profit charter schools in of Florida

Before conducting the data analysis, the sample was disaggregated into two groups: not-for-profit and for-profit charter schools. A Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the per-pupil expenditure and student math achievement for the not-for-profit charter schools. A Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the per-pupil expenditure and student math achievement for the for-profit charter schools. To determine the extent of the difference in the correlation for the not-for-profit and for-

profit charter school, a Fisher's *z* test was performed. The two sample correlations were compared, with the level of significance set at .05.

The correlation coefficient ($r = 0.570$) provided evidence for a moderately strong positive relationship between not-for-profit charter school per-pupil expenditure and not-for-profit charter school math achievement. The correlation coefficient ($r = 0.224$) provided evidence for a moderately weak positive relationship between for-profit charter school per-pupil expenditure and for-profit student math achievement. The results of the Fisher's *z* test for two correlations indicated there was statistically significant difference between the two values, $z = 2.89$, $p = 0.0034$. The correlation for not-for-profit charter schools was significantly stronger than the correlation for the for-profit charter schools. The relationship between PPE and the percentage of students scoring at a satisfactory level or higher on the FCAT 2.0 math assessment was affected by the not-for-profit or for-profit charter school models.

RQ7. To what extent is there a difference in the relationship between the per-pupil expenditure and students' academic performance, as measured by the FCAT 2.0 in science, between the not-for-profit and for-profit charter schools in Florida?

H7. There is a difference in the relationship between the per-pupil expenditure and student academic performance, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0) in science, for the not-for-profit and for-profit charter schools in Florida.

Before conducting the data analysis, the sample was disaggregated into two groups: not-for-profit and for-profit charter schools. The not-for-profit group was comprised of two sub-groups: not-for-profit and not-for-profit (CMO) charter schools. A

Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the per-pupil expenditure and student science achievement for the not-for-profit charter schools. A Pearson product moment correlation coefficient was calculated to index the strength and direction of the relationship between the per-pupil expenditure and student science achievement for the for-profit charter schools. To determine the extent of the difference in the correlation for the not-for-profit and for-profit charter school, a Fisher's *z* test was performed. The two sample correlations were compared, with the level of significance set at .05.

The correlation coefficient ($r = 0.148$) provided evidence for a moderately weak positive relationship between not-for-profit charter school per-pupil expenditure and not-for-profit charter school science achievement. The correlation coefficient ($r = 0.201$) provided evidence for a moderately weak positive relationship between for-profit charter school per-pupil expenditure and for-profit student science achievement. The results of the Fisher's *z* test for the two correlations indicated there not a difference between the two values, $z = 0.89$, $p = 0.374$. The correlation for not-for-profit charter schools was slightly weaker but not significant in difference, as compared to the correlation for for-profit charter schools. The relationship between PPE and the percentage of students scoring at a satisfactory level or higher on the FCAT 2.0 science assessment was not affected by the not-for-profit or for-profit status charter school models.

Additional Analyses

In response to a public records request, the FLDOE provided a listing of every charter school in Florida for the school years 2011-2012, 2012- 2013, and 2013-2014. The list provided by the FLDOE had the charter schools disaggregated by not-for-profit

and for-profit status. Additionally, the designation of the use of a management company by charters schools was provided. All for-profit charter schools had a management company. The not-for-profit charter schools were further disaggregated into not-for-profit and not-for-profit (CMO) schools, charter schools that do not have a management company and those that have a management company. When descriptive statistics were calculated and as displayed previously in this chapter, the division of the not-for-profit charter schools into groups that did not have a management company and those that did by the FLDOE showed possible differences in PPE and academic performance among the not-for-profit, not-for-profit (CMO), and for-profit charter schools. These potential differences prompted the need for additional analyses to establish if there were statistically significant differences among the three subgroups. As such, a one-factor ANOVA was conducted to determine if differences existed in each of the dependent variables (PPE, percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments) among the three charter school models (not-for-profit, not-for-profit [CMO], and for-profit).

The results of the analysis for PPE indicated a statistically significant difference between at least two means, $F = 124.081$, $df = 2, 1207$, $p = .000$. See Table 30, in the descriptive statistics section, for the sample size, means, and standard deviations for this analysis. A follow-up post hoc was conducted to determine which pairs of means were different. The Tukey's Honestly Significant Difference (HSD) test indicated that one mean was significantly different from the two other means. The not-for-profit mean PPE (M = \$6,130.34) was significantly higher than the not-for-profit (CMO) mean PPE (M = \$5,276.58). The not-for-profit mean (M = \$6,130.34) was also significantly higher than

the for-profit mean (*M* = $5,373.56). As calculated from Table 30, the data indicated there was a mean difference of $853.76 between the not-for-profit and not-for-profit (CMO) charter schools. The mean difference between the not-for-profit and for-profit charter schools was $756.78.

The results of the analysis for the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessment indicated a statistically significant difference between at least two means, $F = 3.013$, $df = 2, 1201$, $p = .050$. See Table 26, in the descriptive statistics section, for the sample size, means, and standard deviations for this analysis. A follow up post hoc was conducted to determine which pairs of means were different. The Tukey's HSD test indicated that two means were significantly different ($p = .050$). The not-for-profit mean ($M = 58.81\%$) was significantly higher than the not-for-profit (CMO) mean ($M = 52.00\%$). As calculated from data from Table 26, the mean difference for the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessment between the not-for-profit and not-for-profit (CMO) subgroups was 6.81%.

The results of the analysis for the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment indicated a statistically significant difference between at least two means, $F = 4.846$, $df = 2, 1191$, $p = .008$. See Table 27, in the descriptive statistics section, for the means and standard deviations for this analysis. A follow up post hoc was conducted to determine which pairs of means were different. The Tukey's HSD test indicated that one mean was significantly different from the two other means ($p = .008$). The not-for-profit mean ($M = 57.19\%$) was significantly higher than the not-for-profit (CMO) mean ($M = 49.57\%$). The for-profit mean (M = 58.54%) was

also significantly higher than the not-for-profit (CMO) mean (M = 49.57%). As calculated from data presented in Table 27, the mean difference for the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment between the not-for-profit and not-for-profit (CMO) and the for-profit and not-for-profit (CMO) subgroups was 7.62% and 8.97%, respectively.

The results of the analysis for the percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment indicated a statistically significant difference between at least two means, $F = 3.767$, $df = 2, 1096$, $p = .023$. See Table 28, in the descriptive statistics section, for the sample size, means, and standard deviations for this analysis. A follow up post hoc was conducted to determine which pairs of means were different. The Tukey's HSD test indicated that two means were significantly different ($p = .023$). The for-profit mean ($M = 52.66\%$) was significantly higher than the not-for-profit (CMO) mean ($M = 44.84\%$). As calculated from data presented in Table 28, the mean difference for the percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment between the for-profit and not-for-profit (CMO) subgroups was 7.82%.

In summary, the additional analyses, which utilized ANOVA and post hoc Tukey HSD, established multiple significant mean differences. First, there was a significant mean difference in PPE between the not-for-profit charter schools and both the not-for-profit (CMO) and for-profit charter schools, with the not-for-profit charter schools spending significantly more money per pupil. Second, in the areas of the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading and math assessment, there was a significant difference between the not-for-profit and not-for-profit (CMO)

charter schools. The not-for-profit charter schools had a significantly higher percentage of students scoring satisfactory or higher on the FCAT 2.0 reading and math assessments. Lastly, in the areas of the percentage of students scoring satisfactory or higher on the FCAT 2.0 math and science assessments, there was a significant difference between the for-profit and not-for-profit (CMO) charter schools. The for-profit charter schools had a significantly higher percentage of students scoring satisfactory or higher on the FCAT 2.0 math and science assessments.

Summary

Chapter four included an overview of the descriptive statistics for the sample, the results of the data analysis and hypothesis testing for the not-for-profit and for-profit charter schools in Florida as it related to annual PPE; FCAT 2.0 results for reading, math, and science; and the strength of the relationship between PPE and state assessment results. The results of the independent samples *t* tests, Pearson correlation coefficients, and Fisher's *z* tests were presented and interpreted. Additional analyses were conducted between the not-for-profit, not-for-profit (CMO), and for-profit charter schools. The results of the one-factor ANOVAs and post hoc Tukey's HSD were reported. Chapter five begins with a summary of the research study, which contains an overview of the problem, purpose statement and research questions, and a review of the methodology. Chapter five continues with the major findings and findings related to the literature and closes with the implications for action, recommendations for future research, and concluding remarks.

Chapter Five

Interpretation and Recommendations

Presented in this chapter are the interpretations of the data and the recommendations related to the current study. This chapter begins with the study summary. The study summary includes an overview of the problem, the purpose statement and research questions, a review of the methodology used for the study, and the major findings. Chapter five closes with the findings related to the literature and the conclusions, which include the implications for action, recommendations for future research, and concluding remarks.

Study Summary

Included in the study summary is a brief summary of this study of the not-for-profit and for-profit charter schools in Florida as it related to PPE and student outcomes on the FCAT 2.0 reading, math, and science assessments. The summary contains an overview of the problem. Second, the study summary includes an explanation of the study purpose and alignment of research questions. The third section of the study summary specifies the methodology utilized in this research study. In the last section of the study summary, the major findings are presented.

Overview of the problem. As stated in chapter two, charter schools are a relatively new phenomenon within the world of education. With charter schools only being in existence for twenty-five years, research on charter schools has been limited and primarily focused on studies of charter school student academic performance as compared to that of public school student performance. Moreover, comparative research on the academic performance of not-for-profit and for-profit charter school models is

more elusive. With increasing numbers of charter schools across the United States and a faster growing number of for-profit charter schools in Florida, it was important to determine if per-pupil-expenditure in not-for-profit and for-profit charter schools was different and if these expenditures had a relationship to student outcomes as measured by the FCAT 2.0 in reading, math, and science.

Purpose statement and research questions. As stated in chapter one, the purpose of this study was threefold. The first purpose of this study was to determine if there was a significant difference in the per-pupil expenditure between the two different models of charter schools in Florida, the not-for-profit and the for-profit charters. RQ1 addressed the first purpose. The second purpose of this study was to determine if there was a significant difference in the academic performance in content areas of reading, math, and science between not-for-profit and for-profit charter school students, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0). RQ2, RQ3, and RQ4 addressed the second purpose, specifically measuring the extent of the differences in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments, respectively. The third purpose of the study was to determine whether there was a difference in the relationship between per-pupil expenditures and academic performance in math, reading, and science between the not-for-profit and for-profit charter schools. RQ5, RQ6, and RQ7 addressed the third purpose of the current study, specifically indexing the strength and direction of the relationship between the per-pupil expenditure and the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments, respectively.

Review of the methodology. As stated in the overview of the methodology in chapter one, this study of the not-for-profit and for-profit charter schools in Florida used causal-comparative research methods. The independent variable for this study was the charter school management model, and the dependent variables were the per-pupil expenditure and the FCAT 2.0 reading, math, and science results for the 2011-2012 through 2013-2014 school years. The population for the study was the charter schools in Florida during the same period. The sample for the study included the state-approved, district-sponsored, and accredited charter schools that received reading, math, and science state assessment scores, as measured by the FCAT 2.0. An independent samples *t* test, with a comparison of the sub-sample population means, was employed to determine the difference in per-pupil expenditure for the not-for-profit and for-profit charters schools. Due to the differences in the sizes and the disparate variances of the not-for-profit and for-profit sub-samples and the per-pupil expenditures, a Levene's test for equality of variance was conducted to assess the possible need for and use of a Welch's *t* test instead of an independent samples *t* test. Results from the independent samples t-test were selected and reported based upon the significance level of the Levene's test for equality of variance. Additionally, independent samples *t* tests, with a comparison of sub-sample population means, were utilized to determine the differences in the percentage of students scoring at a satisfactory level or higher on the FCAT 2.0 reading, math, and science tests. Due to the differences in the sizes and the disparate variances of the not-for-profit and for-profit sub-samples and student outcomes on the FCAT 2.0 reading, math and science assessments, a Levene's test for equality of variance was conducted to assess the possible need for and use of a Welch's *t* test instead of an

independent samples *t* test. Results from the independent samples *t* tests were selected and reported based upon the significance level of the Levene's test for equality of variance. To determine the difference in the relationship between the per-pupil expenditure and student academic performance in reading, math, and science, as measured by the FCAT 2.0, Pearson correlation coefficients were used. Fisher's *z* tests were conducted to determine if the correlations were similar or different for the not-for-profit and for-profit charter schools.

Major findings. The major findings of the study are presented as related to each of the three purposes. The first major finding is related to the differences in PPE between the not-for-profit and for-profit charter school. The second major finding is related to the differences in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments between the not-for-profit and for-profit charter schools. The third major finding is related to the differences in the relationships between PPE and student outcomes, as measured by the FCAT 2.0 assessments, between the not-for-profit and for-profit charter schools.

The first major finding of the study related to the extent of the difference in PPE between the not-for-profit and for-profit charter school. On average, the not-for-profit charter schools annually spent significantly more per student than did the for-profit charter schools. The additional analyses, which were conducted to address differences among the not-for-profit, not-for-profit (CMO), and for-profit, indicated that the not-for-profit mean PPE was significantly higher than the not-for-profit (CMO) mean PPE. The not-for-profit mean PPE was also significantly higher than the for-profit mean PPE. The not-for-profit (CMO) charter schools had the lowest average per-pupil expenditure.

The second major finding of the study related to the extent of the difference in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments between the not-for-profit and for-profit charter school. The analysis of differences in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments was mixed. On average, there was not a significant difference in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessments among the not-for-profit and for-profit charter schools. Additionally, there was not a significant difference in the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment among the not-for-profit and for-profit charter schools. In the area of science, a difference was found in the average percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment among the not-for-profit and for-profit charter schools, with the for-profit charter schools outperforming the not-for-profit charter schools. The additional analyses were conducted by analyzing the not-for-profit, not-for-profit (CMO), and for-profit charter schools subgroups. The results indicated significant differences in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments among the charter school subgroups. In the area of reading, more not-for-profit charter school students scored satisfactory or higher on the FCAT 2.0 reading assessment than did not-for-profit (CMO) charter school students. In the area of mathematics, a higher percentage of students scored satisfactory or higher on the FCAT 2.0 math assessment for the not-for-profit charter schools, as compared to the not-for-profit (CMO) charter schools. The for-profit charter schools had a higher percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment, as compared to the not-for-

profit (CMO) charter school students. In the area of science, there was a statistically significant difference between the for-profit and not-for-profit (CMO) charter schools, with the for-profit charter schools having a higher percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment, as compared to the not-for-profit (CMO) charter schools.

The third major finding of the study related to the difference in the relationship between the per-pupil expenditure and student academic performance, as measured by the FCAT 2.0 reading, math, and science assessments for the not-for-profit and for-profit charter schools. The results of the current study were mixed when determining if there was a difference in the relationship between the per-pupil expenditure and students' academic performance, as measured by the FCAT 2.0 reading, math, and science assessments, between the not-for-profit and for-profit charter schools. Analyses for differences between the Pearson product moment correlation coefficients indicated positive relationships between the PPE and the percentage of students scoring satisfactory or higher on each of the FCAT 2.0 assessments, including reading, math, and science. In the area of reading, there was a moderately weak positive relationship between the not-for-profit and for-profit charter schools' annual PPE and the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessment. A difference was not found in the correlations between the not-for-profit and for-profit charter schools, as it related to PPE and the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessment. In the area of math, there was a moderately strong positive relationship between the not-for-profit charter school PPE and the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment.

The strong positive relationship between not-for-profit charter schools PPE and math differ from the moderately weak positive relationship between the for-profit charter schools PPE and the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment. A statistically significant difference was found in the correlations between the not-for-profit and for-profit charter schools, as it related to PPE and the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment, with the correlation for the not-for-profit charter schools being significantly stronger than the correlation for the for-profit charter schools. In the area of science, there was a moderately weak positive relationship for the not-for-profit and for-profit charter schools' annual PPE and the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading assessment. There was a statistically significant difference in the correlation, with the not-for-profit charter schools being weaker than the for-profit charter schools. The relationship between PPE and the percentage of students scoring at a satisfactory level or higher on the FCAT 2.0 science assessment was not affected by the not-for-profit or for-profit status charter school models. The study results indicated the relationships between PPE and percentage of students scoring satisfactory level or higher on the FCAT 2.0 reading and science assessments were not affected by the not-for-profit or for-profit charter school model status. However, the relationship between PPE and the percentage of students scoring at a satisfactory level or higher on the FCAT 2.0 math assessment was affected by the not-for-profit or for-profit charter school models, with the for-profit charter schools having a stronger positive relationship than compared to that of the not-for-profit charter schools.

Findings Related to the Literature

This section includes a comparison and analysis of the results of the current study to the existing research presented in chapter two on the topic and specifically related to per-pupil expenditure, academic achievement of charter schools by not-for-profit and for-profit models, and the relationship between per pupil expenditure and student achievement. The comparison and analysis of the current study's findings to the existing literature as presented in chapter two provided similarities and differences. The findings related to the literature are presented below in the same order as the overarching themes of the research questions: PPE, academic achievement, and the relationship of PPE and academic achievement.

The findings of the current study indicated a difference in annual PPE, with the not-for-profit charter schools spending significantly more money per student than did the for-profit charter schools. When looking at existing literature, there have been few studies looking specifically at charter school per pupil expenditures. However, similar to Furgeson et al. (2013), the descriptive statistics for the current study denoted large variations in per-pupil expenditure for each of the charter school models. The sample used for the current study excluded all charter schools designated as schools catering to only exceptional needs populations. When excluding the charter schools which catered to exceptional needs populations, the variances between the minimum and maximum PPE was the largest for the not-for-profit schools. The variance in PPE was nearly identical for the for-profit charter schools, with the not-for-profit CMO having the smallest variance in PPE. The smaller amount for the not-for-profit (CMO) sub-group may be due to the significantly smaller sample size of the sub-group.

RQ2, RQ3, and RQ4 were designed to determine the extent of the difference in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading, math, and science assessments, respectively, between the not-for-profit and for-profit charter schools. The academic results of the current study were mixed, with there being no significant difference in the percentage of students scoring satisfactory or higher on the FCAT 2.0 reading and math assessments between the not-for-profit and for-profit charter schools. In the area of science, a statistically significant difference was found in the percentage of students scoring satisfactory or higher on the FCAT 2.0 science assessment between not-for-profit and for-profit charter schools. Additional analyses were conducted, and the findings indicated that the not-for-profit charter schools had a higher percentage of students scoring satisfactory or higher than did the not-for-profit (CMO) and the for-profit. In the content areas of math and science, the additional analyses indicated that the for-profit charter schools had more students scoring satisfactory or higher of the FCAT 2.0 than did the not-for-profit and not-for-profit (CMO) charter schools. There was not a strong alignment of the current academic findings to existing research due to the current study being unique in its configuration and usage of the Florida charter school models. Comparisons among specific aspects of the studies reviewed in chapter two with findings of the current study follow, along with results of the analyses.

The Hill and Welsch (2007) study, which only measured math performance in Michigan's not-for-profit and for-profit EMO charter schools, indicated evidence of declined student achievement for the for-profit charter EMO schools as compared to the not-for-profit CMO charter schools. Albeit the results of the current study indicated a

difference in the percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment between the not-for-profit and for-profit charter schools, with the for-profit charter schools having a slightly higher percentage of students scoring satisfactory or higher, the difference was not significant. However, the additional analysis of the current study indicated a different finding, with the not-for-profit (CMO) having the lowest percentage of students scoring satisfactory or higher on the FCAT 2.0 math assessment, as compared to the not-for-profit and for-profit (EMO) charter schools. The difference between the two studies may be attributed to several factors, including that the Hill and Welsch (2007) study was limited to students in grades 4 and 8 and that the Hill and Welsch sample size was considerably smaller than that of the current study, with 1,533 students. Additionally, the difference between the two studies may be attributed to the fact that the Hill and Welsch defined the EMO charter management model as both not-for-profit and for-profit, as compared to the not-for-profit charter schools in the current study being free-standing or CMO.

The results of the current study more closely aligned to the findings of the Woodworth and Raymond (2013) study, with the exception of CMO academic performance. In their study for CREDO, Woodworth and Raymond (2007) found the CMOs had weak results, but still managed to out-perform the not-for-profit charters that did not have a management company relationship, specifically in the areas or reading and math. The results of the additional analyses of the current study revealed that the not-for-profit charter and for-profit charter schools had a higher percentage of students scoring satisfactory or higher in the areas of reading, math, and science, as compared to that of the not-for-profit (CMO) charter schools. This difference may be due to the significantly

smaller sample of not-for-profit (CMO) schools in Florida as compared to the not-for-profit Florida charter schools. Moreover, the Woodworth and Raymond (2007) study results indicated that charter schools with an EMO appeared to top the academic performance of both the CMO and the not-for-profit charter schools. The results of the current study confirmed these findings in the areas of math and science, where the for-profit charter school in Florida achieved a higher percentage of students scoring satisfactory or higher on the FCAT 2.0 math and science assessments, but not significantly different than the results of the not-for-profit charter schools. The similarities in the findings, with for-profit charter schools having higher academic achievement in math and science, may be due to the replication process and the economies of scale provided by large management organizations that can more easily provide resources such as computer devices, math manipulatives, and science equipment.

RQ5, RQ6, and RQ7 were developed to determine the extent of the difference in the relationship between the per-pupil expenditures and students' academic performance in reading, math, and science, as measured by the FCAT 2.0, between the not-for-profit and for-profit charter schools. The results of the current study established differences in the relationships between PPE and reading, math, and science achievement as measured by the percentage of students scoring satisfactory or higher on the FCAT 2.0. In the area of reading, the results of the current study denoted a moderately weak positive relationship for both the not-for-profit and for-profit charter schools. In the area of math, the results of the current study indicated a statistically significant difference between the not-for-profit and for-profit charter schools in regards to the relationship between PPE and math achievement, with the not-for-profit charter schools having a moderately strong

positive relationship and the for-profit charter schools having a moderately weak positive relationship. In the area of science, the results of the current study specified a statistically significant difference between the not-for-profit and for-profit charter schools in regards to the relationship between PPE and science achievement, with a moderately weak positive, but slightly stronger, relationship between PPE and science achievement for the for-profit charter schools. These results parallel the findings of Hedges et al. (1994) and Greenwald et al. (1996), in which positive relationships were found between PPE and student achievement. The descriptive results of the current study mirrored the results of Elliott (1998), in which positive relationships between per-pupil expenditures and math and science achievement were found.

Conclusions

As stated in chapter one, the number of Florida charter schools has increased and continues to increase since their inception in 1997. Additionally, the FLDOE (2015) established that the charter school market utilizing a management company, including the not-for-profit (CMO) and for-profit charter schools, is growing at a significantly faster rate than that of the not-for-profit market. Despite the quickly expanding charter school market and the deregulation of charter school law by the state legislature, Florida's charter schools are not finding the same academic or financial success across the different charter school models, not-for-profit and for-profit. The results of the current study found statistically significant differences in PPE, with the not-for-profit charter schools spending a greater amount than did the for-profit charter schools. The results of the current study established mixed academic results for the not-for-profit and for-profit charter schools, with the additional analyses indicating that Florida's not-for-profit

(CMO) charter schools having the lowest percentage of students scoring satisfactory or higher in reading, math, and science on the FCAT 2.0. As stated by Hassel et al. (2006), Florida's charter schools and their initiatives need to be thoroughly investigated and studied. Thus, the results of the data analysis provide additional information, in regards to multiple aspects of Florida public school charter education, for charter school stakeholders to consider. First, the data provides invaluable information regarding inequitable per pupil spending and its effects on academic performance throughout the charter school market that can be utilized by the state legislature, district sponsoring school boards, charter school boards, and principals in creating processes for equitable spending aligned to increased student achievement. Next, the results from the hypotheses testing and additional analyses conducted for the current study could assist school districts in determining how charter school applicants are approved, based upon PPE, academic performance, and the relationship between PPE and academic performance for the not-for-profit, not-for-profit (CMO), or for-profit charter school models. Additionally, the district sponsoring school board, charter school board, principal, and stakeholders could benefit from determining the importance or necessity of a relationship with a management company and the impact of that relationship. The following sections provide implications for action and recommendations for future research.

Implications for action. The results of the current research study afford several implications for action. The implications relate to PPE and charter school model type. Additionally, the results present implications for the regulation and standardization of several aspects of charter schools.

Based on the findings from the current study, there was a statistically significant difference in per pupil expenditure between the not-for-profit and for-profit charter schools. As defined by Florida state statute (2003), Florida's charter schools are part of the state's public education system. As such, equitable per pupil expenditure is the right of every public school student and must be addressed by the Florida state legislature to ensure that all students are receiving the same equitable funding from their schools and that there is a means of accountability produced through mandated annual reporting of PPE. Additionally, as evidenced in the additional analyses, the not-for-profit (CMO) had the largest management fees and lowest PPE. Just as the Florida State legislature has placed a cap on the fees that can be assessed by a sponsoring district to oversee a charter school, the Florida State Legislature could likewise place a cap on the fees that can be assessed by a management company to assist in equalizing the PPE across the charter school models.

Based on the findings from the current study, the not-for-profit and for-profit charter schools had mixed academic results that were not significantly different for reading and math achievement, but significantly different for science. When the not-for-profit charter school group was disaggregated for the additional analyses and evaluated separately as the not-for-profit and not-for-profit (CMO) sub-groups, the mean percentage of students achieving a satisfactory or higher score on the FCAT 2.0 were significantly different, with the not-for-profit and for-profit charter schools outperforming the not-for-profit (CMO) charter schools in reading, math, and science. As such, Florida charter schools would benefit from their respective charter school board of directors carefully selecting a management company, should one be needed. Additionally, Florida

charter school students would benefit from academic oversight of charter school curricula and assessments by sponsoring school districts and the FLDOE. Increased academic accountability can be achieved through regulation and oversight of the innovation practices that are the cornerstone of charter schooling, assessments, and school improvement plans of the varying charter schools to ensure equitable access and implementation of the state curriculum and improved student achievement.

Lastly, as stated in chapter one, the deregulation of Florida charter schools has resulted in inconsistent reporting of several standard educational reporting points. For the current study, 169 charter schools were not included as they did not, per state statute, report FCAT 2.0 state assessment scores. Additionally, 131 charter schools were not included due to a lack of financial information, as their annual required audits were missing and not located on the Florida Auditor General website. Actions like these have been evidenced and are a result of corruption and mismanagement of many of Florida's charter school, which has resulted in a climate of distrust. Trust can be rebuilt through providing increased transparency. All charter schools would benefit from increased transparency achieved through standardization and regulation of currently mandated reporting required under Florida charter school law. To do so, the Florida State Legislature must empower sponsoring districts by increasing their charter school sponsorship authority and oversight training. This would allow for an increase of capacity to authorize, deauthorize, and oversee charter school compliance with 1) public reporting of state assessment scores for all charter schools with tested grades, 2) public reporting of annual student enrollment numbers and the related FEFP allotments made to charter schools, and 3) annual audits filed in compliance with the accepted audit

standards, the Government Auditing Standards issued by the Comptroller General of the United States, and in accordance with the provisions of the Florida Auditor General – Chapter 10.850 and posted by the Florida Auditor General. Lastly, the Florida State Legislature must pass legislation requiring the public reporting of all management fees that impact PPE. By doing so, questionable budgetary practices and conflicts of interest such as what has been witnessed in facility rental practices, as referenced by Hiaasen and McGrory (2011), would be reduced.

Recommendations for future research. Just as there are highly effective schools, there are also highly effective management companies. As the academic results of this study were mixed, it could be hypothesized that the differences in student achievement are not due to the not-for-profit or for-profit status, but to the effectiveness of the management company. Thus, the first recommendation is to replicate the study with an additional independent variable, the charter school management company. This additional investigation would allow for the determination of the overall effectiveness of each of Florida's management companies in regards to PPE and student achievement and the relationship between these variables. This information would be invaluable to sponsoring districts, school boards, and the FLDOE. The second recommendation is to replicate the study using a PPE that is calculated by subtracting all management fees, including those that are masked or hidden such as rental fees, from the annual FEFP allotment to determine if there is a difference between non-for-profit and for-profit PPE and its relationship to student achievement in reading, math, and science. Many of the studies referenced in chapter two utilized additional independent variables relating to student demographics within the charter school models. As such, the third

recommendation for future research is to replicate and extend the current study by expanding the independent variables to include student demographics, including race, gender, and free and reduced lunch status looking specifically at the relationship between increased PPE and student achievement outcomes in reading, math, and science, as it relates to each of the independent variables. A replicated study such as this would support the research of CREDO (2009) in looking at the relationship between the academic successes of the subgroups, as well as the relationship between PPE and student outcomes in reading, math, and science in these settings. The fourth recommendation is to replicate and extend the study over a ten-year period, which would require adjustments made for scoring changes related to the Florida state-assessment and related scoring processes. Additionally, in regards to expanding the duration of the study, the fifth recommendation is to replicate the study making annual comparisons of the data points over the same period. The sixth recommendation is to replicate and extend the study adding an independent variable, the replication status of the school, which would allow for a longitudinal investigation of the academic success of the replication schools.

Concluding remarks. As previously stated, Florida charter schools are part of the FLDOE Office of Independent Education and Parental Choice School Choice Program. Throughout Florida, school choice allows parents the option of enrolling their student in a public charter school. As stated by Rees (2014), school choice is about "giving every child access to a high-quality school, [which] requires adequate funding, an amicable regulatory structure that allows school leaders to bring innovations to classrooms and information for parents to make educated choices" (p. 1). The findings of this study provided insight into the funding and academic performance of Florida's charter schools,

and should provide additional information, which would allow parents to make an educated decision when choosing a charter school for their students.

With a growing population of charter schools throughout Florida and with a disproportionate number of charter schools being for-profit and not-for-profit (CMO) charter schools which assess management fees, parents must educate themselves carefully on all aspects of the charter school process. As this is a daunting task for any parent, additional assistance is recommended from local and state leaders. As charter schools are public schools, the Florida State Legislature and the Florida Office of Independent Education and Parental Choice must provide assistance in creating an environment of transparency that assists parents in making educated decisions.

Results from the current study, specifically regarding the statistically significant disparities in PPE and the statistically significant decreased mean percentage of students scoring satisfactory or higher on the reading, math, and science state assessments for the non-for-profit CMOs, warrant concern from the FLDOE Office of Independent Education and Parental Choice and the Florida State Legislature. In a play on Thomas Jefferson's famous words from The Declaration of Independence, Rooney (n.d.) stated, "All men are not created equal but should be treated as though they were under the law" (p. 1). In a similar fashion, all charter schools are not created equal, as they vary in not-for-profit or for-profit status, use of a management company, grade configuration, and more. However, all charter school should be treated the same under the law and must be held accountable for adhering to the same mandated state reporting requirements. At present, Florida state statute requires the annual reporting of student enrollment, FEFP allotments from the FLDOE, annual financial audits, and annual academic results for all tested

students. To increase the transparency of the financial management of Florida charter schools, charter schools should be required to report any management company relationship, along with all associated management fees as these may affect per pupil expenditure and consequently student achievement. By doing so, parents will better be able to make fully educated decisions regarding the placement of their child in a charter school.

As stated by the National Alliance for Public Charter Schools (2016), "Every child deserves a chance to succeed. Charter schools are some of the top-performing schools in the country" (p. 1). If Florida charter school parents, the FLDOE Office of Independent Education and Parental Choice, and the Florida State legislature believed that every child deserves a chance to succeed, they would collaboratively work together to ensure that per pupil expenditure is equitable and not decreased due to management fees to ensure the academic success and growth of every student, not the financial success and growth of the management companies. By doing so, stakeholders would guarantee that all charter schools are the academically top-performing schools in their district, state, and country.

References

American School Choice. (2013, September 21, 2013). *ESP, EMO, CMO: What purpose do network charter operators serve?* Retrieved from http://americanschoolchoice.com/what-is-school-choice/what-purpose-do-network-charter-operators-serve/

Anderson, L, Adelman, N., Yamashiro, K., Donnelly, M. B., Finnigan, K, Blackorby, J., … Hirsch, E. (2000). *Planning and evaluation service evaluation of public charter schools program: Year one evaluation report 2000*. (U.S. Department of Education: Doc # 2011-06.) Retrieved from https://www2.ed.gov/rschstat/eval/choice/pcsp-year1/edlite-title.html

Bateman, A. (2011, September 15). Florida policies create charter school boom. *Heartlander*. Retrieved from http://news.heartland.org/ newspaper-article/2011/09/15/florida-policies-create-charter-school-boom

Betts, J., & Atkinson, R. (2012, January 13). Better research needed on the impact of charter schools. [Web blog post]. Retrieved from http://hobokencurriculumproject.blogspot.com/2012/08/better-research-needed-on-impact-of.html

Betts, J., & Tang, E. (2008). Charter schools and student achievement: A review of the evidence. In Robin J. Lake, (Ed.), *Hopes, fears and reality: A balanced look at charter schools in 2008* (p. 1-8). Bothell, WA: National Charter School Research Project, Center on Reinventing Public Education.

Biddle, B., & Berliner, D. (2002). A research synthesis/unequal school funding in the United States. *Educational Leadership, 59*(8). Retrieved from http://www.ascd.org/publications/educational-leadership/may02/vol59/num08/Unequal-School-Funding-in-the-United-States.aspx

Blalock, N., & Amrein-Beardsly, A. (2013, December 15). Charter v. public school students: NAEP 2013 performance. [Web blog post]. Retrieved from http://vamboozled.com/charter-v-public-school-students-naep-2013-performance/

Bryant, J. (2015, September 15). How Jeb Bush's Florida plan for school 'choice' created an industry of corruption and chaos: The obsession over money driving charter school growth in Florida is increasingly evident to those who bother to look. *Alternet*. Retrieved from http://www.alternet.org/education/how-jeb-bushs-florida-plan-school-choice-created-industry-corruption-and-chaos

Budde, R. (1974). *Education by charter. Restructuring school districts*. The Regional Laboratory for Educational Improvement of the Northeast & Islands. Retrieved from https://www.edreform.com/wp-content/uploads/2014/12/Education-by-Charter-Restructuring-School-Districts-Ray-Budde.pdf

Bureau of Economic and Business Research. (2012). *Florida estimates of population*. Retrieved from http://www.flsuspop.org/docs/florida_population_facts.htm

Center for Research on Education Outcomes. (2009). *Multiple choice: Charter school performance in 16 states*. Retrieved from http://credo.stanford.edu/reports/MULTIPLE_CHOICE_CREDO.pdf

Center for Research on Education Outcomes. (2015). *Urban charter school study report on 41 regions*. Retrieved from https://urbancharters.stanford.edu/download/Urban%20Charter%20School%20Study%20Report%20on%2041%20Regions.pdf

Coleman, J. S., United States, & National Center for Education Statistics. (1966). *Equality of educational opportunity*. Washington: U.S. Dept. of Health, Education, and Welfare, Office of Education; [for sale by the Superintendent of Documents, U.S. Govt. Print. Off.]

The Comprehensive School Reform Quality Center. (2006). *CSRQ center report on education service providers.* Retrieved from http://www.bestevidence.org/word/CSRQ_Ed_Service_Providers_April_2006.pdf

Coutts, S. (2011). *Charter schools outsource education to management firms, with mixed results.* Retrieved from https://www.propublica.org/article/charter-schools-outsource-education-to-management-firms-with-mixed-results

Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. (4th ed.). Thousand Oaks, CA: Sage Publications

Dolan, R., & Schmidt, R. (1987). Assessing the impact of expenditure on achievement: Some methodological and policy considerations. *Economics of Education Review, 6*(3), 285–299.

Dorn, S. (2004). Reforming the structure of Florida's accountability system. (Policy Brief EPSL-0401-106-EPRU). Retrieved from the National Education Policy Center website: http://nepc.colorado.edu/files/EPSL-0401-106-EPRU.pdf

Eisenhower, D. (1958). Dwight D. Eisenhower: "Statement by the President Upon Signing the National Defense Education Act.," September 2, 1958. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. Retrieved from http://www.presidency.ucsb.edu/ws/?pid=11211.

Ellinger, K., Wright, D., III, & Hirlinger, M. (1995). Brains for bucks?: School revenue and student achievement in Oklahoma. *The Social Science Journal, 32*(3), 299-308.

Elliott, M. (1998, July). School finance and opportunities to learn: Does money well spent enhance students' achievement? *Sociology of Education, 71*(3). Retrieved from http://martaelliott.com/wp-content/uploads/2014/06/1998-Elliott-School-Finance-and-Opportunities-to-Learn.pdf

Elmore, R. (1998). The national education panel goals: Purposes, progress, and prospects. Retrieved from http://govinfo.library.unt.edu/negp/reports/elmoref.htm

Emerson, A. (2015). *Ch_ar_mgmt_2011-14 and chaschenrollment_1112_1213_1314* [Data file]. Unpublished raw data.

Ferguson, R. (1991). Paying for public education: New evidence on how and why money matters. *Harvard Journal on Legislation, 28*(2), 465–498.

Finn, C., & Petrelli, M. (2009, January 29). Will the recession kill school reform? Lack of funding could boost schools' productivity. *Forbes.com*. Retrieved from http://www.forbes.com/2009/01/29/school-reform-education-funding-opinions-contributors_0129_chester_finn_michael_petrilli.html

Fischel, W. (2003). Courts as policymakers: School finance reform litigation. [Review of Courts as policy makers: School finance reform litigation, by Anna Lukemeyer]. *Law and Politics Book Review*, *13*, 1. Retrieved from http://www.bsos.umd.edu/gvpt/lpbr/subpages/reviews/lukemeyer-anna.htm

Florida Consortium of Public Charter Schools. (2013). *What is a charter school? Faqs about charter schools*. Retrieved from http://floridacharterschools.org/schools/what_is_a_charter_school/#q1

Florida Department of Education. (2006). *Florida's charter schools: A decade of progress*. Tallahassee, FL: Office of Independent Education and Parental Choice.

Florida Department of Education. (2010). *Student achievement in Florida's charter schools: A comparison with achievement in traditional public schools*. Tallahasee, FL: Office of Independent Education and Parental Choice and Bureau of Evaluation and Reporting.

Florida Department of Education. (2012). *Charter school report: Charter school capital outlay, school district expenditures related to charter schools, and administration of federal programs to charter schools.* Retrieved from http://www.fldoe.org/core/fileparse.php/7507/urlt/0075817-charterschoolreport-ch2011-232.pdf

Florida Department of Education. (2013). Notice of proposed Rule 6A-1.0081, charter school and charter technical career center monthly financial statements and financial conditions. Retrieved from https://www.flrules.org/gateway/ruleno.asp?id=6A-1.0081

Florida Department of Education. (2013a). *Test design summary: 2012-13 operational assessments*. Retrieved from http://www.fldoe.org/core/fileparse.php/3/urlt/designsummary13.pdf

Florida Department of Education. (2013b). *Understanding FCAT 2.0 reports.* Retrieved from http://fcat.fldoe.org/mediapacket/2013/pdf/2013UFR.pdf

Florida Department of Education. (2014). *FCAT 2.0 and Florida eoc assessments achievement levels*. Retrieved from http://www.fldoe.org/core/fileparse.php/3/urlt/achlevel.pdf

Florida Department of Education, School Choice. (2014, February). *Charter schools program*. Retrieved from http://www.floridaschoolchoice.org/information/charter_schools/files/fast_facts_charter_schools.pdf

Florida Department of Education. (2014, April). *Student achievement in Florida's charter schools: A comparison with achievement in traditional public schools*. Tallahassee, FL: Office of Independent Education and Parental Choice and Bureau of Evaluation and Reporting. Retrieved from https://www.floridaschoolchoice.org/PDF/Charter_Student_Achievement_2013.pdfFlorida Department of Education, School Choice. (2014, February). Charter schools program. Retrieved from http://www.floridaschoolchoice.org/information/charter_schools/files/fast_facts_charter_schools.pdf

Florida Department of Education (2014, July). *2014 guide to calculating school grades*. Retrieved from http://schoolgrades.fldoe.org/pdf/1314/SchoolGradesCalcGuide2014.pdf

Freedom Trails Foundation. (2012). *First public school site and Ben Franklin statue.* Retrieved from http://www.cityofboston.gov/freedomtrail/firstpublic.asp

Furgeson, J., Gill, B., Haimson, J., Killewald, A., McCullough, M., Nichols-Barrer, I., Teh B., … Lake, R. (2013). *The national study of charter management organization (cmo) effectiveness charter-school management organizations: Diverse strategies and diverse student impacts*. Retrieved from http://www.crpe.org/publications/charter-school-management-organizations-diverse-strategies-and-diverse-student-impacts

Girod, G., & Girod, M. (2012). Chapter 4: Standards Based School: Example Chapter, Volume 1, Chapter 4 (p. 1-10). Retrieved from http://www.wou.edu/~girodm/100/brief_history_of_standards.pdf

Grady, S., & Bielick, S. (2010). *Trends in the use of school choice: 1993 to 2007* (NCES 2010-004). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Graham, E. (2013, April). A Nation at Risk turns 30: Where did it take us? *NEAToday: Education Policy*. Retrieved from http://neatoday.org/2013/04/25/a-nation-at-risk-turns-30-where-did-it-take-us-2/

Greene, J., Forster, G., & Winters, M. (July 1, 2003). *Apples to apples: An evaluation of charter schools serving general student populations*. (No. 1). Retrieved from http://www.manhattan-institute.org/pdf/ewp_01.pdf

Greenfield, T. (2002). *Research methods for postgraduates*. (2nd ed.). London, England: Arnold.

Greenwald, R., Hedges, L., & Laine, R. (1996). The effect of school resources on student achievement. *Review of Educational Research*, *66*(3), 361-396. Retrieved from http://www.viriya.net/jabref/the_effect_of_school_resources_on_student_achievement.pdf

Gulosino, C. (2011, October 6). Charter trends: Suburban challenges to charter school growth [Blog post]. Retrieved from http://www.charternotebook.org/charter-trends-suburban-challenges-to-charter/

Hanushek, E. (1981). Throwing money at schools. *Journal of Policy Analysis and Management, 1*(1), 24-28. Retrieved from http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%201981%20JPAM%201(1).pdf

Hanushek, E. (1986). The economics of schooling: Production and efficiency in public schools. *Journal of Economic Literature*. *49*(3), 1141-1177. Retrieved from http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%201986%20JEL%2024(3).pdf

Hanushek, E. (1989). The impact of differential expenditures on school performance. *Educational Researcher, 18*(4), p. 45-51. Retrieved from http://hanushek.stanford.edu/sites/default/files/publications/hanushek%201989%20EducResearcher%2018(4).pdf

Harter, E. (1999). How educational expenditures relate to student achievement: Insights from Texas elementary schools. *Journal of Education Finance, 24*(3), 281–302.

Hassel, B., Terrell, M., & Kowal, J. (2006). *Florida charter schools: Hot and humid with passing storms*. (Education Sector Report). Retrieved from Education Sector website: http://www.educationsector.org/publications/florida-charter-schools-hot-and-humid-passing-storms

Hedges, V., Laine, R., & Greenwood, R. (April 1994). An exchange: Part I: Does money matter? A meta-analysis of studies of the effects of differential school inputs on student outcomes. *Educational Researcher, 23*(3), 5-11. Retrieved from http://202.120.223.158/download/6e43ef5a-8254-4c22-a1b7-8e96fc7e806d.pdf

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/cashing-in-on-kids/article1939199.html

Hill, C., & Welsch, D. (2007). *Is there a difference between for-profit versus not-for-profit charter schools?* [University of Wisconsin Working Paper #08-02]. Retrieved from https://www.uww.edu/Documents/colleges/cobe/economics/wpapers/08_02_Hill_Welsch.pdf

Jackson, C. K., Johnson, R. C., & Persico, C. (2015). *The effects of school spending on educational and economic 0utcomes: Evidence from school finance reforms.* Retrieved from http://www.nber.org/papers/w20847

Johnson, R. B., & Christensen, L. (2014). *Educational research: Quantitative, qualitative, and mixed approaches*. Thousand Oaks, CA: Sage Publications, Inc.

Jorgensen, M., & Hoffman, J. (2003). *History of the no child left behind act of 2001* (NCLB) (Assessment Report). San Antonio, TX: Pearson Education, Inc.

Kahlenberg, R., & Potter, H. (2014). Restoring Shanker's vision for charter schools. *American Educator*, *38*(4). Retrieved from http://www.aft.org/ae/winter2014-2015/kahlenberg_potter.

Karp, S. (2010, August 13). Many Chicago charter schools run deficits, data shows. *The New York Times*. Retrieved from http://www.nytimes.com/2010/08/13/us/13cnccharters.html?pagewanted=all

Kolderie, T. (1990). *Beyond choice to new public schools: Withdrawing the exclusive franchise in public education* (Report No. 8). Washington, DC: Progressive Policy Institute.

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

Kolderie, T. (2005, July 3). Budde's ideas expanded upon by Al Shanker, then jump to Minnesota. *Updates and Insights*, *1*(6). Retrieved from http://www.educationevolving.org/newsletters/vol-1-no-6.

Kolderie, T. (2008). How the idea of 'chartering'schools came about: What role did the citizen's league play? *Minnesota Journal*, *25*(5), 5-6.Retrieved from http://www.educationevolving.org/pdf/Origins-of-Chartering-Citizens-League-Role.pdf

Lake, R., Dusseault, B., Bowen, M., Demeritt, A., & Hill, P. (June 2010). *The national study of charter management organization (CMO) effectiveness: Report on interim findings*. Seattle, WA: Center on Reinventing Public Education and Mathematica Policy Research.

Leachman, M., Albares, N., Masterson, K., & Wallace, M. (2016, January 25). *Most states have cut school funding, and some continue cutting*. Center on Budget and Policy Priorities. Retrieved from http://www.cbpp.org/sites/default/files/atoms/files/12-10-15sfp.pdf

Lezotte, L. (2001). *Revolutionary and evolutionary: The effective schools movement.* Retrieved from https://www.edutopia.org/pdfs/edutopia.org-closing-achievement-gap-lezotte-article.pdf

Loveless, T. (2002) *Charter school achievement and accountability* (Research Report PEPG/02-09). Retrieved from http://www.hks.harvard.edu/pepg/PDF/events/TAConfPDF/PEPG02-09%20TA%20Loveless.pdf

Lunenburg, F., & Irby, I. (2008). *Writing a successful thesis or dissertation: Tips and strategies for students in the social and behavioral sciences*. Thousand Oaks, CA: Corwin Press

Mace-Matluck, B. (1987). *The effective schools movement: Its history and context*. Austin, Texas: Southwest Educational Development Laboratory. Retrieved from http://files.eric.ed.gov/fulltext/ED304781.pdf

McClure, V., & Shanklin, M. (2007, March 25). Risky choices. *Orlando Sentinel*. Retrieved from orlandosentinel.com/news/orl-chday1main07mar25,0,4137923.story

McDonald, J. H. (2014). *Handbook of biological statistics*, (3rd ed.). Baltimore, MD: Sparky House Publishing.

McGrory, K. (2012, February 27). Lawmakers listen to Jeb Bush, whose foundation affects education in Florida. *Tampa Bay Times*. Retrieved from http://www.tampabay.com/ news/education/k12/lawmakers-listen-to-jeb-bush-whose-foundation-affects-education-in-florida/1217398

Mead, S. (2007). Easy way out. *Education Next, 7*(1). Retrieved from http://educationnext.org/easy-way-out/

Mead, S., LiBetti Mitchel, A., & Rotherham, A. J. (2015). *The state of the charter school movement.* Washington, DC: Bellwether Education Partners. Retrieved from http://bellwethereducation.org/sites/default/files/Charter Research 0908 FINAL.pdf

Melton, R. (2015, January 14). *FEFP 101*. Florida School Boards Association. Retrieved from http://fsba.org/wp-content/uploads/2015/01/2014-15-FEFP-101.pdf

Miron, G. (2007). *Education management organizations*. Retrieved from http://a100educationalpolicy.pbworks.com/f/Miron_EMO_Chpt27.pdf

Miron, G., Urschel, J. L., Yat Aguilar, M. A., & Dailey, B. (2013). *Profiles for for-profit and nonprofit educational management organizations*. The Thirteenth Annual Report 2010-2011. National Education Policy Center. Retrieved September 22, 2013 from http://nepc.colorado.edu/files/EMO-profiles-10-11_0.pdf

Minnesota Legislative Reference Library. (2011). *Resources on Minnesota issues: Charter schools*. Retrieved from http://www.leg.state.mn.us/lrl/issues/issues?issue=charter

Mugera, W. (2013). *Non-probability sampling techniques*. Retrieved from https://learning.uonbi.ac.ke/courses/LDP603/work/assig_2/Non-probability_sampling_techniques_assignment_1.pdf

Nathan, J. (1996). Heat and light in the charter school movement. *Phi Delta Kappan*, *79*(7), 499-505. Retrieved from https://www.questia.com/library/journal/1G1-20521083/heat-and-light-in-the-charter-school-movement

National Alliance for Public Charter Schools. (2011). *CMO and EMO public charter schools: A growing phenomenon in the charter school sector public charter schools dashboard data from 2007-08, 2008-09, and 2009-10.* Retrieved from http://www.publiccharters.org/wp-content/uploads/2014/01/NAPCS-CMO-EMO-DASHBOARD-DETAILS_20111103T102812.pdf

National Alliance for Public Charter Schools. (2012). *Annual national rankings of charter school laws released today finds overall advances in quality and accountability* [Press Release]. Retrieved from http://www.publiccharters.org/PressReleasePublic/?id=665

National Alliance for Public Charter Schools. (2012). *The public charter schools dashboard: A comprehensive data resource from the National Alliance for Public Charter Schools*. Retrieved from http://dashboard.publiccharters.org/dashboard/schools/page/overview/year/2011

National Alliance for Public Charter Schools. (2014). *The health of the public charter school movement: A state-by-state analysis*. Retrieved from http://www.publiccharters.org/wp-content/uploads/2014/09/health-of-the-movement-2014.pdf

National Alliance for Public Charter Schools. (2014). *Estimated numbers of public charter schools and students, 2013-14.* Retrieved from http://www.publiccharters.org/wp-content/uploads/2014/02/New-and-Closed-Report-February-20141.pdf

Nelson, G. (2011, July 5). FCAT results: Charter schools have high failure rate. *CBS4 Miami*. Retrieved from http://miami.cbslocal.com/2011/07/05/fcat-results-show-charter-schools-failure-rate-much-worse-than-public-schools/

Nicotera, A. (2009, April). Charter school achievement: What we know. *National Alliance for Public Charter Schools*. Retrieved from http://www.publiccharters.org/wp-content/uploads/2014/01/Summary_of_Achievement_Studies_Fifth_Edition_2009_Final_20110402T222331.pdf

No Child Left Behind (NCLB) Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002)

North Central Regional Educational Laboratory. (2012). *Summary of goals 2000: Educate America act*. Retrieved from http://www.ncrel.org/sdrs/areas/issues/envrnmnt/stw/sw0goals.htm

Northwest Regional Educational Laboratory, Office of Planning and Service Coordination. (2004). *Making sense of adequate yearly progress* (U.S. Department of Education contract number ED-01-CO-0013). Retrieved from http://nwrcc.educationnorthwest.org/filesnwrcc/webfm/docs/AYP.pdf

O'Brien, E. M. & Dervarics, C. (2012). *Charter schools: Finding out the facts: At a glance.* Retrieved from http://www.centerforpubliceducation.org/Main-Menu/Organizing-a-school/Charter-schools-Finding-out-the-facts-At-a-glance

O'Connor, J. (2011, October13). *Charters not a choice in many Florida counties*. State Impact Florida: Putting Education Reform to the Test. Retrieved from https://stateimpact.npr.org/florida/2011/10/13/charters-not-a-choice-in-many-florida-counties/

Office of Independent Education and Parental Choice. (2009). *Guidance for developing and monitoring charter school financial practices* (Technical Assistance Paper Report Number 2009-02). Retrieved from Florida School Choice website: http://www.floridaschoolchoice.org/information/Charter_schools/files/Financial_Condition_Reference_Guide_TAP.pdf

Office of Program Policy Analysis and Government Accountability. (2002). *Charter school management strengthened, but improved academic accountability needed* (Report No. 02-22). Retrieved from http://www.oppaga.state.fl.us/MonitorDocs/Reports/pdf/0222rpt.pdf

Office of Program Policy Analysis and Government Accountability. (2005a). *Charter school performance comparable to other public schools; stronger accountability needed* (Report No. 05-21). Retrieve from http://www.oppaga.state.fl.us/MonitorDocs/Reports/pdf/0521rpt.pdf

Office of Program Policy Analysis and Government Accountability. (2005b). *Charter school review technical report* (Report No. 05-22). Retrieved from http://www.oppaga.state.fl.us/MonitorDocs/Reports/pdf/0522rpt.pdf

Powell, A. (2007). *How sputnik changed U.S. education*. Retrieved March 3, 2012, from Harvard University, Harvard Gazette Web Site: http://news.harvard.edu/gazette/story/2007/10/how-sputnik-changed-u-s-education/

Public Broadcasting Service. (2004) *Closing the achievement gap: Charter school faq*. Retrieved from http://www.pbs.org/closingtheachievementgap/faq.html

Rees, N. (2014, January 28). School choice should be a fundamental right: Parents -- regardless of income level -- should always have educational options. *U. S. News and World Report*. Retrieved from http://www.usnews.com/opinion/blogs/nina-rees/2014/01/28/national-school-choice-week-highlights-importance-of-empowering-parents

Rooney, A. (n.d.). BrainyQuote.com. Retrieved from http://www.brainyquote.com/citation/quotes/andyrooney194050.html

Sass, T. (2006). *Charter school and student achievement*. Retrieved from http://www.mitpressjournals.org/doi/pdf/10.1162/edfp.2006.1.1.91

Solochek, J. (2013, November 27). Florida high on list of for-profit charter schools. *Tampa Bay Times*. Retrieved from http://www.tampabay.com/blogs/gradebook/florida-high-on-list-of-for-profit-charter-schools/2154468

State of Florida Auditor General. (2015, August 30). *Auditor general district school board, charter school, and similar entities, Florida virtual school, or virtual instruction program provider audit report submittal checklist* (Sections 218.39(1)(d)-(f), 1002.37(6)(d), or 1002.45(2)(a)10., Florida Statutes). Retrieved from http://www.myflorida.com/audgen/pages/pdf_files/dsb_charter_submittal.pdf

Strauss, V. (2011, October 19). *Report documents charter school growth*. The Washington Post. Retrieved from http://www.washingtonpost.com/blogs/answer-sheet/post/report-documents-charter-school-growth/2011/10/19/gIQAcKEHyL_blog.html

Strickland, K. (1991). The school finance reform movement, a history and prognosis: Will Massachusetts join the third wave of reform?, *Boston College Law Review, 32*(5/4), 1105-1177. Retrieved from http://lawdigitalcommons.bc.edu/bclr/vol32/iss5/4

Stockburger, D. (2015). *Introductory statistics: Concepts, models, and applications*. Retrieved from http://www.psychstat.missouristate.edu/introbook/sbk17m.htm

Student and Parental Rights and Educational Choices, Florida State Statute 1022.33(23) (2010).

Thomas, S. (2006, February 2). Do charter schools cause growth? *Daily Commercial.* Retrieved from http://www.dailycommercial.com/main.asp?SectionID=31&SubSectionID=162&ArticleID=1

Towers, J. (1992). Twenty-five years after the Coleman report: What should we have learned? *The Clearing House, 65*(3), 138-140. Retrieved from http://www.jstor.org/stable/30188935

Trochim, W. M. (2001). *Research methods knowledge base*. Cincinnati, OH: Atomic Dog Pub.

U. S. Census Bureau. (2010). *2010 census interactive population search: FL*. Retrieved August 30, 2015 from http://www.census.gov/2010census/popmap/ipmtext.php?fl=12

U. S. Department of Education (2000). *Evaluation of the public charter schools program: Year one evaluation report 2000*. (Document # 2001-06). Retrieved from https://www2.ed.gov/rschstat/eval/choice/pcsp-year1/edlite-intro.html.

U. S. Department of Education (July 2008). *Helping families by supporting and expanding school choice.* Retrieved from http://www2.ed.gov/nclb/choice/schools/choicefacts.html

U. S. Department of Education. (2008). *A nation accountable: Twenty-five years after a nation at risk*. Retrieved from https://www2.ed.gov/rschstat/research/pubs/accountable/accountable.pdf

U. S. Department of Education, Institute of Education Sciences, and the National Center for Education Statistics. (2004). *America's charter schools: Results from the NAEP 2003 pilot study,* (NCES #2005-456). Retrieved from https://nces.ed.gov/nationsreportcard/pdf/studies/2005456.pdf

U. S. Office of the White House (2001). *A history of the white house domestic policy council 1993-2001: Prepared for the Clinton administration history project, Washington D.C., 2001*. Retrieved from https://clintonlibrary.gov/assets/DigitalLibrary/AdminHistories/Box%20011-020/Box%20016/1226192-domestic-policy-council-1.pdf

Wagner, J. (2012). Pennsylvania Department of the Auditor General, Bureau of School Audits. *Charter and cyber charter education funding reform should save taxpayers $365 million annually.* Pennsylvania Department of the Auditor General. Retrieved from www.paauditor.gov/Media/Default/Reports/CyberCharterSpecialReport201206.pdf

Wenglinsky, H. (1997a). How money matters: The effect of school district spending on academic achievement. *Sociology of Education, 70*(3), 221–237.

Wenglinsky, H. (1997b). *When money matters: How educational expenditures improve student performance and how they don't*. Princeton, NJ: Educational Testing Service.

Wells, C. S. & Wollack, J. A. (2003). An instructor's guide to understanding test reliability. Retrieved from https://testing.wisc.edu/Reliability.pdf

Woodworth, J., & Raymond, M. (2013). *Charter school growth and replication (Volume 2)*. Retrieved from https://credo.stanford.edu/pdfs/CGAR%20Growth%20Volume%20II.pdf

Appendices

Appendix A: Number of Florida Charter Schools by County and Model

Table A1

Number of Florida Charter Schools by County and Model

County		Total Number	NFP	NFP (CMO)	FP (EMO)
Alachua					
	2011-12	16	14	2	0
	2012-13	16	14	2	0
	2013-14	14	12	2	0
Baker					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Bay					
	2011-12	8	6	0	2
	2012-13	10	8	0	2
	2013-14	10	8	0	2
Bradford					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Brevard					
	2011-12	7	3	1	3
	2012-13	7	3	1	3
	2013-14	10	4	1	5
Broward					
	2011-12	75	33	3	39
	2012-13	86	38	3	45
	2013-14	97	43	4	50

Calhoun					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Charlotte					
	2011-12	1	1	0	0
	2012-13	1	1	0	0
	2013-14	1	1	0	0
Citrus					
	2011-12	1	1	0	0
	2012-13	1	1	0	0
	2013-14	1	1	0	0
Clay					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Collier					
	2011-12	3	3	0	0
	2012-13	3	3	0	0
	2013-14	5	5	0	0
Columbia					
	2011-12	0	0	0	0
	2012-13	1	1	0	0
	2013-14	2	2	0	0
Dade					
	2011-12	109	34	0	75
	2012-13	120	31	0	89
	2013-14	128	29	0	99

DeSoto					
	2011-12	1	1	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Dixie					
	2011-12	1	1	0	0
	2012-13	1	1	0	0
	2013-14	1	1	0	0
Duval					
	2011-12	18	10	1	7
	2012-13	21	12	1	8
	2013-14	30	15	1	14
Escambia					
	2011-12	9	7	0	2
	2012-13	9	7	0	2
	2013-14	8	6	0	2
Flagler					
	2011-12	3	3	0	0
	2012-13	3	3	0	0
	2013-14	2	1	1	0
Franklin					
	2011-12	1	1	0	0
	2012-13	1	1	0	0
	2013-14	1	1	0	0
Gadsden					
	2011-12	1	1	0	0
	2012-13	1	1	0	0
	2013-14	1	1	0	0

Gilchrist					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Glades					
	2011-12	2	0	0	2
	2012-13	2	0	0	2
	2013-14	2	0	0	2
Gulf					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Hamilton					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Hardee					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Hendry					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Hernando					
	2011-12	1	1	0	0
	2012-13	1	1	0	0
	2013-14	3	3	0	0

Highlands					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Hillsborough					
	2011-12	36	24	0	12
	2012-13	43	29	0	14
	2013-14	43	26	0	17
Holmes					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Indian River					
	2011-12	5	5	0	0
	2012-13	5	4	1	0
	2013-14	5	4	1	0
Jackson					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Jefferson					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Lafayette					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0

Lake					
	2011-12	10	9	1	0
	2012-13	10	9	1	0
	2013-14	10	9	1	0
Lee					
	2011-12	25	14	0	11
	2012-13	24	15	0	9
	2013-14	21	9	3	9
Leon					
	2011-12	4	4	0	0
	2012-13	6	4	0	2
	2013-14	6	5	0	1
Levy					
	2011-12	2	2	0	0
	2012-13	2	2	0	0
	2013-14	2	2	0	0
Liberty					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Madison					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	2	2	0	0
Manatee					
	2011-12	10	8	1	1
	2012-13	11	8	2	1
	2013-14	13	10	2	1

Marion					
	2011-12	3	3	0	0
	2012-13	3	3	0	0
	2013-14	3	3	0	0
Martin					
	2011-12	2	2	0	0
	2012-13	2	2	0	0
	2013-14	2	2	0	0
Monroe					
	2011-12	6	5	0	1
	2012-13	6	4	0	2
	2013-14	6	5	0	1
Nassau					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Oskaloosa					
	2011-12	3	3	0	0
	2012-13	3	3	0	0
	2013-14	3	3	0	0
Okeechobee					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Orange					
	2011-12	29	22	3	4
	2012-13	32	23	4	5
	2013-14	32	22	4	6

Osceola					
	2011-12	8	4	3	1
	2012-13	12	4	1	7
	2013-14	13	6	1	6
Palm Beach					
	2011-12	35	30	2	3
	2012-13	41	32	2	7
	2013-14	49	34	2	13
Pasco					
	2011-12	5	5	0	0
	2012-13	5	5	0	0
	2013-14	7	5	1	1
Pinellas					
	2011-12	17	9	0	8
	2012-13	21	11	1	9
	2013-14	21	10	1	10
Polk					
	2011-12	24	24	0	0
	2012-13	28	28	0	0
	2013-14	26	26	0	0
Putnam					
	2011-12	1	1	0	0
	2012-13	2	2	0	0
	2013-14	3	3	0	0
Santa Rosa					
	2011-12	2	2	0	0
	2012-13	2	2	0	0
	2013-14	2	2	0	0

Sarasota					
	2011-12	9	8	1	0
	2012-13	9	7	2	0
	2013-14	10	8	2	0
Seminole					
	2011-12	3	3	0	0
	2012-13	3	3	0	0
	2013-14	3	3	0	0
St. Johns					
	2011-12	3	3	0	0
	2012-13	5	5	0	0
	2013-14	5	5	0	0
St. Lucie					
	2011-12	2	0	1	1
	2012-13	3	0	1	2
	2013-14	4	0	1	3
Sumter					
	2011-12	1	1	0	0
	2012-13	1	1	0	0
	2013-14	1	1	0	0
Suwanee					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Taylor					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0

Union					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0
Volusia					
	2011-12	9	6	0	3
	2012-13	8	5	0	3
	2013-14	8	4	0	4
Wakulla					
	2011-12	1	1	0	0
	2012-13	1	1	0	0
	2013-14	1	1	0	0
Walton					
	2011-12	3	3	0	0
	2012-13	3	3	0	0
	2013-14	3	3	0	0
Washington					
	2011-12	0	0	0	0
	2012-13	0	0	0	0
	2013-14	0	0	0	0

Note. NFP = Not-for-profit. NFP (CMO) = Not-for-profit (Charter Management Organization). FP (EMO) = For-profit (Educational Management Organization). Adapted from Microsoft Excel spreadsheets, "chSchEnrollment_1112_1213_1314" and "cha_ar_mgmt_2011-13" per public records request to the FLDOE (2015). Copyright 2015 by the FLDOE

Appendix B: Percentage of Public and Charter Schools Making AYP

Table B1

AYP Calculations for the Percentage of Public vs. Charter Schools Making AYP (2005-2006 through 2009-2010)

	Alaska	Arizona	Arkansas	California	Colorado
2005-2006					
Public	62.00%	86.70%	60.60%	65.70%	75.30%
Charter	60.90%	75.40%	78.60%	65.90%	76.20%
Difference	1.10%	11.30%	-18.00%	-0.20%	-0.90%
2006-2007					
Public	65.90%	67.30%	61.70%	66.50%	72.70%
Charter	82.60%	73.30%	71.40%	67.60%	76.90%
Difference	-16.70%	-6.00%	-9.70%	-1.10%	-4.20%
2007-2008					
Public	58.90%	72.40%	58.00%	52.10%	57.10%
Charter	69.60%	73.00%	81.80%	56.40%	66.70%
Difference	-10.70%	-0.60%	-23.80%	-4.30%	-9.60%
2008-2009					
Public	56.20%	72.60%	54.30%	50.50%	54.20%
Charter	96.00%	69.30%	43.80%	51.40%	70.30%
Difference	-39.80%	3.30%	10.50%	-0.90%	-16.10%
2009-2010					
Public	59.80%	74.40%	53.10%	38.30%	58.20%
Charter	84.60%	71.30%	36.40%	35.30%	66.00%
Difference	-24.80%	3.10%	16.70%	3.00%	-7.80%

Year	Connecticut	Delaware	D. C.	Florida	Georgia
2005-2006					
Public	66.30%	81.40%	14.50%	28.70%	79.30%
Charter	71.40%	76.90%	15.00%	41.00%	0.00%
Difference	-5.10%	4.50%	-0.50%	-12.30%	79.30%
2006-2007					
Public	68.20%	70.50%	24.60%	33.60%	82.20%
Charter	57.10%	70.60%	31.80%	45.20%	84.10%
Difference	11.10%	-0.10%	-7.20%	-11.60%	-1.90%
2007-2008					
Public	57.90%	71.20%	23.10%	24.00%	79.90%
Charter	28.60%	70.60%	33.90%	40.00%	78.90%
Difference	29.30%	0.60%	-10.80%	-16.00%	1.00%
2008-2009					
Public	58.90%	66.10%	25.30%	23.40%	86.00%
Charter	40.00%	42.90%	17.20%	35.30%	84.10%
Difference	18.90%	23.20%	8.10%	-11.90%	1.90%
2009-2010					
Public	71.80%	40.20%	7.70%	13.80%	77.40%
Charter	52.90%	37.50%	7.00%	29.60%	74.30%
Difference	18.90%	2.70%	0.70%	-15.80%	3.10%

Year	Hawaii	Idaho	Illinois	Indiana	Iowa
2005-2006					
Public	35.50%	73.30%	79.10%	49.30%	83.30%
Charter	44.00%	79.20%	84.20%	44.40%	0.00%
Difference	-8.50%	-5.90%	-5.10%	4.90%	83.30%
2006-2007					
Public	65.20%	26.80%	76.40%	52.00%	93.40%
Charter	65.40%	46.20%	69.60%	44.10%	0.00%
Difference	-0.20%	-19.40%	-6.80%	7.90%	93.40%
2007-2008					
Public	42.00%	55.90%	68.40%	54.10%	69.40%
Charter	29.60%	82.10%	64.00%	42.10%	0.00%
Difference	12.40%	-26.20%	4.40%	12.00%	69.40%
2008-2009					
Public	35.60%	66.30%	59.20%	50.10%	69.80%
Charter	28.60%	79.30%	41.40%	38.20%	0.00%
Difference	7.00%	-13.00%	17.80%	11.90%	69.80%
2009-2010					
Public	50.70%	62.30%	47.50%	58.60%	63.90%
Charter	42.30%	70.00%	30.80%	30.80%	0.00%
Difference	8.40%	-7.70%	16.70%	27.80%	63.90%

Year	Kansas	Louisiana	Maryland	MA	Michigan
2005-2006					
Public	86.30%	90.70%	76.90%	58.60%	86.30%
Charter	90.00%	100.00%	61.50%	69.80%	76.00%
Difference	-13.70%	-9.30%	15.50%	-11.20%	10.30%
2006-2007					
Public	88.00%	88.20%	77.10%	51.90%	82.00%
Charter	83.30%	100.00%	57.10%	64.30%	89.60%
Difference	4.70%	-11.80%	20.00%	-12.40%	-7.60%
2007-2008					
Public	89.60%	81.30%	83.40%	36.60%	73.10%
Charter	78.90%	90.00%	70.00%	71.20%	79.40%
Difference	10.70%	-8.70%	13.40%	-34.60%	-5.70%
2008-2009					
Public	87.80%	90.80%	77.00%	37.80%	90.80%
Charter	69.60%	96.20%	58.80%	66.10%	84.20%
Difference	18.20%	-5.40%	18.20%	-28.30%	6.60%
2009-2010					
Public	81.70%	88.10%	68.10%	33.50%	89.50%
Charter	85.70%	69.50%	60.00%	29.10%	82.40%
Difference	-4.00%	18.60%	8.10%	4.40%	7.10%

Year	Minnesota	Mississippi	Missouri	Nevada	N. H.
2005-2006					
Public	69.50%	83.80%	70.70%	53.00%	60.60%
Charter	59.10%	100.00%	0.00%	58.80%	100.00%
Difference	10.50%	-16.20%	70.70%	-5.80%	-39.40%
2006-2007					
Public	62.10%	79.30%	53.60%	67.30%	57.90%
Charter	50.90%	100.00%	15.00%	61.10%	75.00%
Difference	11.20%	-21.70%	38.60%	6.20%	-17.10%
2007-2008					
Public	51.30%	86.00%	42.60%	59.90%	38.20%
Charter	47.30%	100.00%	5.90%	76.50%	100.00%
Difference	14.00%	-14.00%	36.70%	-16.60%	-61.80%
2008-2009					
Public	46.30%	64.50%	37.40%	57.20%	46.00%
Charter	48.20%	0.00%	26.70%	73.70%	100.00%
Difference	-1.90%	64.50%	10.70%	-16.50%	-54.00%
2009-2010					
Public	46.30%	0.00%	36.60%	45.90%	31.30%
Charter	48.90%	0.00%	10.00%	61.90%	87.50%
Difference	-2.60%	0.00%	26.60%	-16.00%	-56.20%

Year	New Jersey	New Mexico	New York	N. C.	Ohio
2005-2006					
Public	70.90%	46.20%	71.00%	44.30%	60.60%
Charter	43.10%	51.20%	90.50%	48.40%	34.70%
Difference	27.80%	-5.00%	-19.50%	-4.10%	25.90%
2006-2007					
Public	74.40%	45.40%	80.40%	44.80%	62.10%
Charter	50.90%	61.20%	89.90%	52.20%	32.80%
Difference	23.50%	-15.80%	-9.50%	-7.40%	29.30%
2007-2008					
Public	65.30%	32.30%	83.60%	32.00%	64.10%
Charter	62.50%	47.30%	92.60%	42.90%	32.20%
Difference	2.80%	-15.00%	-9.00%	-10.90%	31.90%
2008-2009					
Public	64.90%	31.80%	88.30%	71.10%	60.50%
Charter	56.50%	35.50%	93.00%	91.70%	36.80%
Difference	8.40%	-3.70%	-4.70%	-20.60%	23.70%
2009-2010					
Public	51.30%	22.20%	63.80%	58.00%	61.10%
Charter	54.10%	46.60%	93.50%	75.60%	41.40%
Difference	-2.80%	-24.40%	-29.70%	-17.60%	19.70%

Year	Oklahoma	Oregon	PA	R. I.	S. C.
2005-2006					
Public	88.90%	68.10%	82.30%	67.70%	38.30%
Charter	41.70%	64.70%	63.30%	100.00%	20.80%
Difference	47.20%	3.40%	19.00%	-32.30%	17.50%
2006-2007					
Public	87.70%	77.60%	77.40%	79.00%	0.00%
Charter	46.20%	65.50%	60.50%	100.00%	37.00%
Difference	41.50%	12.10%	16.90%	-21.00%	NA
2007-2008					
Public	93.00%	62.90%	72.00%	73.30%	19.50%
Charter	93.30%	64.30%	55.70%	60.00%	25.90%
Difference	-0.30%	-1.40%	16.30%	13.30%	-6.40%
2008-2009					
Public	89.40%	70.10%	78.40%	81.10%	50.20%
Charter	93.80%	77.30%	70.40%	72.70%	72.20%
Difference	-4.40%	-7.20%	8.00%	8.40%	-22.00%
2009-2010					
Public	59.20%	71.40%	82.80%	79.30%	53.70%
Charter	50.00%	68.60%	69.70%	63.60%	50.00%
Difference	9.20%	2.80%	13.10%	15.70%	3.70%

Year	Tennessee	Texas	Utah	Virginia	Wisconsin
2005-2006					
Public	83.20%	80.90%	87.60%	77.10%	96.00%
Charter	71.40%	73.50%	94.40%	66.70%	91.50%
Difference	11.80%	7.40%	-6.80%	10.40%	4.50%
2006-2007					
Public	86.80%	90.70%	76.80%	74.10%	95.60%
Charter	90.00%	70.90%	90.20%	66.70%	90.80%
Difference	-32.00%	19.80%	-13.40%	7.40%	4.80%
2007-2008					
Public	80.20%	84.80%	80.80%	74.70%	92.90%
Charter	100.00%	71.80%	94.80%	100.00%	90.50%
Difference	-19.80%	13.00%	-14.00%	-25.30%	2.40%
2008-2009					
Public	79.70%	95.00%	83.20%	71.90%	93.30%
Charter	85.70%	81.40%	95.50%	100.00%	87.10%
Difference	-6.00%	13.60%	-12.30%	-28.10%	6.20%
2009-2010					
Public	70.60%	95.20%	67.00%	61.00%	93.40%
Charter	81.80%	86.80%	89.60%	100.00%	89.90%
Difference	-11.20%	8.40%	-22.60%	-39.00%	3.50%

Year	Wyoming
2005-2006	
Public	84.80%
Charter	100.00%
Difference	*-15.20%*
2006-2007	
Public	0.00%
Charter	66.70%
Difference	*NA*
2007-2008	
Public	75.60%
Charter	33.30%
Difference	*42.30%*
2008-2009	
Public	72.60%
Charter	33.30%
Difference	*39.30%*
2009-2010	
Public	0.00%
Charter	33.30%
Difference	*NA*

Note: Adapted from data collected from the "National Alliance for Public Charter Schools: Public School Dashboard," by the National Alliance for Public Charter Schools, 2016, Copyright 2005-2015 by the National Alliance for Public Charter Schools. Retrieved from http://www.publiccharters.org/dashboard/reports

Appendix C: Percentage of Public and Charter Schools Not Making AYP

Table C1

AYP Calculations for the Percentage of Public vs. Charter Schools Failing to Make AYP (2005-2006 through 2009-2010)

Year	Alaska	Arizona	Arkansas	California	Colorado
2005-2006					
Public	62.00%	86.70%	60.60%	65.70%	75.30%
Charter	60.90%	75.40%	78.60%	65.90%	76.20%
Difference	1.10%	11.30%	-18.00%	-0.20%	-0.90%
2006-2007					
Public	65.90%	67.30%	61.70%	66.50%	72.70%
Charter	82.60%	73.30%	71.40%	67.60%	76.90%
Difference	-16.70%	-6.00%	-9.70%	-1.10%	-4.20%
2007-2008					
Public	58.90%	72.40%	58.00%	52.10%	57.10%
Charter	69.60%	73.00%	81.80%	56.40%	66.70%
Difference	-10.70%	-0.60%	-23.80%	-4.30%	-9.60%
2008-2009					
Public	56.20%	72.60%	54.30%	50.50%	54.20%
Charter	96.00%	69.30%	43.80%	51.40%	70.30%
Difference	-39.80%	3.30%	10.50%	-0.90%	-16.10%
2009-2010					
Public	59.80%	74.40%	53.10%	38.30%	58.20%
Charter	84.60%	71.30%	36.40%	35.30%	66.00%
Difference	-24.80%	3.10%	16.70%	3.00%	-7.80%

Year	Connecticut	Delaware	D. C.	Florida	Hawaii
2005-2006					
Public	66.30%	81.40%	14.50%	28.70%	35.50%
Charter	71.40%	76.90%	15.00%	41.00%	44.00%
Difference	-5.10%	4.50%	-0.50%	-12.30%	-8.50%
2006-2007					
Public	68.20%	70.50%	24.60%	33.60%	82.20%
Charter	57.10%	70.60%	31.80%	45.20%	84.10%
Difference	11.10%	-0.10%	-7.20%	-11.60%	-1.90%
2007-2008					
Public	57.90%	71.20%	23.10%	24.00%	79.90%
Charter	28.60%	70.60%	33.90%	40.00%	78.90%
Difference	29.30%	0.60%	-10.80%	-16.00%	1.00%
2008-2009					
Public	58.90%	66.10%	25.30%	23.40%	86.00%
Charter	40.00%	42.90%	17.20%	35.30%	84.10%
Difference	18.90%	23.20%	8.10%	-11.90%	1.90%
2009-2010					
Public	71.80%	40.20%	7.70%	13.80%	77.40%
Charter	52.90%	37.50%	7.00%	29.60%	74.30%
Difference	18.90%	2.70%	0.70%	-15.80%	3.10%

Year	Idaho	Illinois	Indiana	Kansas	Louisiana
2005-2006					
Public	73.30%	79.10%	49.30%	86.30%	90.70%
Charter	79.20%	84.20%	44.40%	90.00%	100.00%
Difference	-5.90%	-5.10%	4.90%	-13.70%	-9.30%
2006-2007					
Public	65.20%	26.80%	76.40%	52.00%	88.00%
Charter	65.40%	46.20%	69.60%	44.10%	83.30%
Difference	-0.20%	-19.40%	-6.80%	7.90%	4.70%
2007-2008					
Public	42.00%	55.90%	68.40%	54.10%	89.60%
Charter	29.60%	82.10%	64.00%	42.10%	78.90%
Difference	12.40%	-26.20%	4.40%	12.00%	10.70%
2008-2009					
Public	35.60%	66.30%	59.20%	50.10%	87.80%
Charter	28.60%	79.30%	41.40%	38.20%	69.60%
Difference	7.00%	-13.00%	17.80%	11.90%	18.20%
2009-2010					
Public	50.70%	62.30%	47.50%	58.60%	81.70%
Charter	42.30%	70.00%	30.80%	30.80%	85.70%
Difference	8.40%	-7.70%	16.70%	27.80%	-4.00%

Year	Maryland	MA	Michigan	Minnesota	Mississippi
2005-2006					
Public	76.90%	58.60%	86.30%	69.50%	83.80%
Charter	61.50%	69.80%	76.00%	59.10%	100.00%
Difference	15.50%	-11.20%	10.30%	10.50%	-16.20%
2006-2007					
Public	88.20%	77.10%	51.90%	82.00%	62.10%
Charter	100.00%	57.10%	64.30%	89.60%	50.90%
Difference	-11.80%	20.00%	-12.40%	-7.60%	11.20%
2007-2008					
Public	81.30%	83.40%	36.60%	73.10%	51.30%
Charter	90.00%	70.00%	71.20%	79.40%	47.30%
Difference	-8.70%	13.40%	-34.60%	-5.70%	14.00%
2008-2009					
Public	90.80%	77.00%	37.80%	90.80%	46.30%
Charter	96.20%	58.80%	66.10%	84.20%	48.20%
Difference	-5.40%	18.20%	-28.30%	6.60%	-1.90%
2009-2010					
Public	88.10%	68.10%	33.50%	89.50%	46.30%
Charter	69.50%	60.00%	29.10%	82.40%	48.90%
Difference	18.60%	8.10%	4.40%	7.10%	-2.60%

Year	Nevada	N. H.	New Jersey	New Mexico	New York
2005-2006					
Public	53.00%	60.60%	70.90%	46.20%	71.00%
Charter	58.80%	100.00%	43.10%	51.20%	90.50%
Difference	-5.80%	-39.40%	27.80%	-5.00%	-19.50%
2006-2007					
Public	79.30%	53.60%	67.30%	57.90%	74.40%
Charter	100.00%	15.00%	61.10%	75.00%	50.90%
Difference	-21.70%	38.60%	6.20%	-17.10%	23.50%
2007-2008					
Public	86.00%	42.60%	59.90%	38.20%	65.30%
Charter	100.00%	5.90%	76.50%	100.00%	62.50%
Difference	-14.00%	36.70%	-16.60%	-61.80%	2.80%
2008-2009					
Public	37.40%	57.20%	46.00%	64.90%	31.80%
Charter	26.70%	73.70%	100.00%	56.50%	35.50%
Difference	10.70%	-16.50%	-54.00%	8.40%	-3.70%
2009-2010					
Public	36.60%	45.90%	31.30%	51.30%	22.20%
Charter	10.00%	61.90%	87.50%	54.10%	46.60%
Difference	26.60%	-16.00%	-56.20%	-2.80%	-24.40%

Year	N. C.	Ohio	Oklahoma	Oregon	PA
2005-2006					
Public	44.30%	60.60%	88.90%	68.10%	82.30%
Charter	48.40%	34.70%	41.70%	64.70%	63.30%
Difference	-4.10%	25.90%	47.20%	3.40%	19.00%
2006-2007					
Public	45.40%	80.40%	44.80%	62.10%	87.70%
Charter	61.20%	89.90%	52.20%	32.80%	46.20%
Difference	-15.80%	-9.50%	-7.40%	29.30%	41.50%
2007-2008					
Public	32.30%	83.60%	32.00%	64.10%	93.00%
Charter	47.30%	92.60%	42.90%	32.20%	93.30%
Difference	-15.00%	-9.00%	-10.90%	31.90%	-0.30%
2008-2009					
Public	88.30%	71.10%	60.50%	89.40%	70.10%
Charter	93.00%	91.70%	36.80%	93.80%	77.30%
Difference	-4.70%	-20.60%	23.70%	-4.40%	-7.20%
2009-2010					
Public	63.80%	58.00%	61.10%	59.20%	71.40%
Charter	93.50%	75.60%	41.40%	50.00%	68.60%
Difference	-29.70%	-17.60%	19.70%	9.20%	2.80%

Year	R. I.	S. C.	Tennessee	Texas	Utah
2005-2006					
Public	44.30%	60.60%	88.90%	68.10%	82.30%
Charter	48.40%	34.70%	41.70%	64.70%	63.30%
Difference	-4.10%	25.90%	47.20%	3.40%	19.00%
2006-2007					
Public	45.40%	80.40%	44.80%	62.10%	87.70%
Charter	61.20%	89.90%	52.20%	32.80%	46.20%
Difference	-15.80%	-9.50%	-7.40%	29.30%	41.50%
2007-2008					
Public	32.30%	83.60%	32.00%	64.10%	93.00%
Charter	47.30%	92.60%	42.90%	32.20%	93.30%
Difference	-15.00%	-9.00%	-10.90%	31.90%	-0.30%
2008-2009					
Public	88.30%	71.10%	60.50%	89.40%	70.10%
Charter	93.00%	91.70%	36.80%	93.80%	77.30%
Difference	-4.70%	-20.60%	23.70%	-4.40%	-7.20%
2009-2010					
Public	63.80%	58.00%	61.10%	59.20%	71.40%
Charter	93.50%	75.60%	41.40%	50.00%	68.60%
Difference	-29.70%	-17.60%	19.70%	9.20%	2.80%

Year	Virginia	Wisconsin	Wyoming
2005-2006			
Public	77.10%	96.00%	84.80%
Charter	66.70%	91.50%	100.00%
Difference	10.40%	4.50%	-15.20%
2006-2007			
Public	76.80%	74.10%	95.60%
Charter	90.20%	66.70%	90.80%
Difference	-13.40%	7.40%	4.80%
2007-2008			
Public	84.80%	80.80%	74.70%
Charter	71.80%	94.80%	100.00%
Difference	13.00%	-14.00%	-25.30%
2008-2009			
Public	83.20%	71.90%	93.30%
Charter	95.50%	100.00%	87.10%
Difference	-12.30%	-28.10%	6.20%
2009-2010			
Public	67.00%	61.00%	93.40%
Charter	89.60%	100.00%	89.90%
Difference	-22.60%	-39.00%	3.50%

Note: Adapted from data collected from the "National Alliance for Public Charter Schools: Public School Dashboard," by the National Alliance for Public Charter Schools, 2016, Copyright 2005-2015 by the National Alliance for Public Charter Schools. Retrieved from http://www.publiccharters.org/dashboard/reports

Appendix D: IRB Form

BAKER UNIVERSITY

SCHOOL OF EDUCATION
GRADUATE DEPARTMENT

Date:
IRB PROTOCOL NUMBER _____
(IRB USE ONLY)

IRB REQUEST
Proposal for Research
Submitted to the Baker University Institutional Review Board

I. Research Investigator(s) (Students must list faculty sponsor first)

Department(s) **School of Education Graduate Department**

Name	Signature	
1. Dr. Susan Rogers	Susan Rogers	Major Advisor
2. Margaret Waterman	Margaret Waterman	Research Analyst
3. Jim Robins		University Committee Member
4.		External Committee Member

Principal Investigator: Joell Ramsdell
Phone: 913-940-0071
Email: joellrams@aol.com
Mailing address: 9615 W. 92nd Street, Overland Park, KS 66212

Faculty sponsor: Dr. Susan Rogers
Phone:
Email:

Expected Category of Review: _X_ Exempt ___ Expedited ___ Full

II: Protocol: (Type the title of your study)

For Profit or for the Good of the Student: A Correlation Study on Per Pupil Expenditure and Student Achievement in Florida's Charter Schools

Summary

In a sentence or two, please describe the background and purpose of the research.

Florida leads the country in charter school expansion, with well over 600 charter schools currently operating in the state. State monies dedicated to the public school system are now being diverted and shared with increasing numbers charter schools with nearly 40% of these being for-profit organizations. At the same time, a disproportionate number of Florida charter schools are receiving failing grades from the Florida Department of Education, as compared to Florida public schools. This has placed into question the efficacy and financial management of charter schools in Florida and throughout the county.

With three key components, the purpose of this study is multi-faceted. The first purpose of this study is to determine if there was a significant difference in the per pupil expenditure for the two different models of charter schools in Florida, not-for-profit and for-profit charter schools in Florida. The second purpose of this study is to determine if there is a significant difference in the academic performance in math, reading, and science of the students attending these two management models of charter school, as measured by the Florida Comprehensive Assessment Test 2.0 (FCAT 2.0). Thirdly, the purpose of the study is to determine whether there is a relationship between per pupil expenditures and academic performance in math, reading, and science in the two models of charter school management, the not-for-profit and for-profit.

Briefly describe each condition or manipulation to be included within the study.

There are no conditions or manipulations to be included within this study.

What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.
Will the subjects encounter the risk of psychological, social, physical or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.
A combination of archived public data and data accessed through public records requests will be utilized. No observations, questionnaires, or other instruments will be used. As such, there are no subject nor is there a risk of psychological, social, physical or legal risk involved in this study.

Will any stress to subjects be involved? If so, please describe.

Only longitudinal archived public data and public data accessed through public records requests will be utilized. The student academic achievement data will be collected at the building level and not at an individual student level. No observations, questionnaires, or other instruments will be used. As such, there are no subjects or related stress of subjects involved in this study.

Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing.

No subjects will be deceived or misled in any way

Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.

There will be no requests for personal or sensitive information

Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading? If so, please describe.

No subjects will be presented with materials that might be considered to be offensive, threatening, or degrading.

Approximately how much time will be demanded of each subject?

A combination of longitudinal archived public data and public data accessed via a public records request will be utilized. As such, there are no subjects or a demand for their time.

Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.

A combination of longitudinal archived public data and public data accessed via a public records request will be utilized. As such, there are no subjects to be solicited or contacted.

What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?

A combination of longitudinal archived public data and public data accessed via a public records request will be utilized. As such, there are no subjects or inducements for their voluntary participation.

How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.

A combination of longitudinal archived public data and public data accessed via a public records request will be utilized. As such, there are no subjects or a need for consent prior to participating.

Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.

A combination of longitudinal archived public data and public data accessed via a public records request will be utilized. As such, there are no subjects or data that will be a part of any permanent record that can identify a subject.

Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher or employer? If so, explain.

A combination of longitudinal archived public data and public data accessed via a public records request will be utilized. As such, there are no subjects, need to participate, or permanent record referencing lack of participation.

What steps will be taken to insure the confidentiality of the data? Where will it be stored? How long will it be stored? What will be done with it after the study is completed?

A combination of longitudinal archived public data and public data accessed via a public records request will be utilized. Data will be stored on a laptop hard drive and two external hard drives.

If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?

A combination of longitudinal archived public data and public data accessed via a public records request will be utilized. As such, there are no subjects and there are no risks to subjects involved in this study.

Will any data from files or archival data be used? If so, please describe.

Longitudinal archived public data referencing annual charter school budgets will be obtained from the Florida Auditor General's office and longitudinal archived public data referencing overall charter school academic achievement for reading, math, and science as measured by the FCAT 2.0 from the Florida Department of Education will be utilized in this study. Additional public data regarding charter school management fees will be accessed via a public records request.

Appendix E: IRB Approval

Baker University Institutional Review Board

January 2, 2016

Dear Joell Ramsdell and Dr. Rogers,

The Baker University IRB has reviewed your research project application and approved this project under Exempt Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.

Please inform this Committee or myself when this project is terminated or completed. As noted above, you must also provide IRB with an annual status report and receive approval for maintaining your status. If you have any questions, please contact me at CTodden@BakerU.edu or 785.594.8440.

Sincerely,

Chris Todden EdD
Chair, Baker University IRB

Baker University IRB Committee
Verneda Edwards EdD
Sara Crump PhD
Erin Morris PhD
Scott Crenshaw