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2007

Impact of a Charter High School Education on First Semester
University Students

Priva Fischweicher

IMPACT OF A CHARTER HIGH SCHOOL EDUCATION
ON FIRST SEMESTER UNIVERSITY STUDENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in
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Barry University

by

Priva Fischweicher

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Area of Specialization: Higher Education Administration

IMPACT OF A CHARTER HIGH SCHOOL EDUCATION
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ABSTRACT

IMPACT OF A CHARTER HIGH SCHOOL EDUCATION ON FIRST-SEMESTER UNIVERSITY STUDENTS

Priva Fischweicher

Barry University, 2007

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Purpose

Increased governmental intervention, premised on the need to reform the poorly performing public education system in the United States has resulted in myriad academic initiatives. The genesis of the charter school movement may be traced to the landmark report, “*A Nation at Risk*” issued in 1983 by the National Commission on Excellence in Education. This report underscored the inadequacy of public education in the United States premised on a marked decline in educational performance. The concept of educational choice gained acceptance among stakeholders and the charter school became a viable option. Several studies have been conducted to evaluate the efficacy of this type of academic venue with varied conclusions. Yet, studies that investigate academic achievement at the postsecondary level of students educated in a charter high school setting have not been actualized. This study attempted to fill the gap in the research by studying the impact of a charter high school education on the academic achievement of freshman students at four-year public universities in Florida. Academic achievement was evaluated using three constructs: grade point average [GPA] after the first semester at a university, self-efficacy, and critical thinking.

Method

An Analysis of Variance was used to test for significance within and between the two level, independent variable, a traditional high school education and a charter high school education. Data was collected for the dependent variables through self-reported GPA and the following two instruments: *The General Perceived Self-Efficacy Scale* and *The Watson-Glaser Critical Thinking Appraisal, Form S*.

Major Findings

The findings indicated that there was a significant difference at the .05 level, between the grade point averages of the traditional high school graduates and the charter high school graduates, with the former reporting significantly higher GPAs. When analyzing the data from *The General Perceived Self-Efficacy Scale*, no significant difference at the .05 level was found between the level of self-efficacy of the traditional high school graduates and the charter high school graduates. In reference to critical thinking skills, the scores of the traditional high school graduates and the charter high school graduates on *The Watson-Glaser Critical Thinking Appraisal, Form S* showed no significant difference at the .05 level.

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I thank my mentor, Ms. Reid Bernstein for believing in me and being a guiding light during the sometimes stormy passage.

I am grateful to my parents who taught me the importance of education.

Most importantly, I am thankful to A-mighty G-d, the Creator and Sustainer of all creation.

The intellect is the ultimate frontier of G-dliness,
As is written in the Zohar, “No thought can grasp
Him.” Ultimately, G-dliness must come to reside
even in that place which by definition cannot
contain Him. The mind must struggle to understand
all that it can, and then strive to know that which it
cannot comprehend.

The Lubavitcher Rebbe

DEDICATION

To my husband, Chaim and my dear children, Laya and Dovid, Avremy, Chani and Micky, Mendy, Rivkah, and Sruli and precious grandchildren, Yitzi, Sholom Ber, and Chaya whose love and encouragement have helped lighten this seemingly endless journey. May we only celebrate simchas together and revel in each others' accomplishments.

To Aunt Esther and Uncle Jack Stillman who have always been there for me and never doubted that there would finally be a "Dr. Fischweicher in the family."

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CHAPTER I

THE PROBLEM

Introduction

Charter schools are a recent educational phenomenon, evolving from federal legislation that mandated increased levels of academic achievement for all students enrolled in the public school system (Finn, Manno, & Vanourek, 2000). Accountability oversight being promulgated by governmental agencies has led to the school choice movement, allowing parents an increased voice in the genre of educational facility their child attends (Clark, 2002).

Charter schools, one of the options, are varied in construct, including the management structure under which it operates and the selection process of students for admission (Hill, 2005). The foundational underpinning of each charter school, the charter agreement, is unique to that particular institution. Although, greater latitude in faculty acquisition and curricular objectives is characteristic of this type of school, oversight by the local school board and adherence to strict standardized testing timelines is required (Finn, Manno, & Vanourek, 2000).

Certainly, academic achievement is the imperative behind the proliferation of charter schools across the nation. Clearly, this sense of achieving speaks to the millennial generation and expectations of accountability for themselves and by their parents (DeBard, 2004). In addition, the ability to succeed in a global and interdependent market requires individuals to be actively engaged in their own developmental processes, as theorized by Bandura (1986) in his Social Cognitive Theory, and to possess critical thinking skills.

Statement of the Problem

Research studies addressing the efficacy of charter schools on the academic achievement of currently enrolled students have shown diverse results (Bowman, 2000; Garrison & Holifield, 2005; Heaggans, 2006; Hoxby, 2004; Linn, 2001). The difficulty in assessing success is premised on the multifarious confounding variables that make it difficult to compare charter schools to traditional public schools. Yet, following a thorough perusal of the literature, there appears to be a dearth of research that evaluates the impact of a charter high school education on the educational outcomes of freshman at four-year universities.

A correlation between self-efficacy and critical thinking skills and students' academic success has been demonstrated in myriad studies (Bandura, 1997; Collins & Onwuegbuzie, 2000; Facione, Giancarlo, Facione, & Gainen, 1995; Jenkins, 1998; Lane, Lane, & Kyprianou, 2004; Pajares, 1996; Phillips & Bond, 2004; Rucks, 2002; Smith, 1995). Yet, little research has been undertaken that addresses the effect of a charter high school education on these constructs.

A search of the EBSCO electronic database for information about charter schools yielded 233 peer reviewed journal articles. With the inclusion of academic achievement as the second descriptor, eight articles were identified, none dealing with the impact of a charter school education on academic achievement in the realm of higher education institutions.

The insertion of self-efficacy as the lone descriptor yielded 4,048 results; with the addition of academic achievement as the second keyword 109 scholarly journal articles were identified. Inputting charter schools in place of academic achievement yielded zero

articles. Substituting critical thinking as the second descriptor yielded six articles, none addressing educational issues pertinent to this study.

A search of the aforementioned database using critical thinking as the sole keyword produced 1,921 peer reviewed articles; with academic achievement as the second descriptor the yield was 24 articles. Replacing academic achievement with charter schools resulted in zero articles. An additional search was conducted of dissertation abstracts engaging the same criteria used for the literature search of the EBSCO database; the original search utilizing charter schools as the descriptor yielded 299 dissertations. Inserting academic achievement as the second keyword identified 11 dissertations, none addressing the issue of charter school academic achievement and its effect on students enrolled in higher education institutions (see Table 1.1).

Table 1.1

Database Search Results

First Descriptor	Second Descriptor	Third Descriptor
Charter Schools		233
Charter Schools	Academic Achievement	8
Self-Efficacy	Academic Achievement	4,048
Self-Efficacy		109
Self-Efficacy	Charter Schools	0
Self-Efficacy	Critical Thinking	6
Critical Thinking		1,921
Critical Thinking	Academic Achievement	24
Critical Thinking	Charter Schools	0

Purpose of the Study

The purpose of this study is to investigate the effect of a charter high school education on the academic achievement of students attending four-year public universities in Florida at the conclusion of the first semester of their freshman year. Academic achievement was measured by three diverse indicators; Grade point average [GPA], critical thinking, and self-efficacy.

A review of the literature has revealed an established link between self-efficacy and academic achievement (Bandura, 1997; Lane, Lane, & Kyprianou, 2004; Pajares, 1996). Furthermore, there exists a significant quantity of research that articulates the connection between self-efficacy and gender (Bong & Clark, 1999; Pajares, 2002; Zimmerman, 1995). Studies that address self-efficacy and ethnicity (Graham, 1994; Schunk & Pajares, 2002; Stevens, Olivare, Lan, & Tallent-Runnels, 2004) and self-efficacy in relation to socio-economic status (Tong & Song, 2004) have also been undertaken.

The efficacy of critical thinking skills for students living in a multicultural society has been articulated in the literature (Bonds, 1993). In addition, the role of critical thinking in the attainment of academic success has been expressed in many research studies (Collins & Onwuegbuzie, 2000; Facione, Giancarlo, Facione, & Gainen, 1995; Jenkins, 1998; Phillips & Bond, 2004; Rucks, 2002; Smith, 1995).

Charter school research, vis-à-vis academic achievement, has yielded varied findings supporting and denigrating the efficacy of an education in that genre of institution (Bowman, 2000; Garrison & Holifield, 2005; Heaggans, 2006; Hoxby, 2004;

Linn, 2001). Yet, a dearth of research exists on the effect of a charter high school education on the academic achievement of students enrolled in higher education institutions.

Theoretical Framework

A review of the literature identified self-efficacy and critical thinking as two variables that impact on the academic achievement of students. Bandura (1997) posited that fortuity in happenstance, motivational intensity, and affective states are individually governed by a person's belief system, rather than the truth endemic to the specific situation. Bandura theorized that this construct of belief, which he termed efficacy, is the impetus for action. Additionally, efficacy beliefs impact on resilience when faced with challenges, levels of negative thought processes when goals appear unattainable, and the degree of task attainment.

Bong and Clark (1999) posited that within the sphere of academic achievement, self-efficacy is domain specific, predicated on mastery in that subject area. Bandura (1997) did not concur with this appraisal, stating that general self-efficacy beliefs that reside higher up the self-efficacy continuum would encourage academic risk taking, not necessary aligned to a student's proven cognitive capabilities. Pajares (2002) agreed with this viewpoint, stating that an individual's self-beliefs are more influential on academic achievement than one's innate abilities, thus concluding that self-efficacy drives academic achievement.

The effect of self-efficacy on academic achievement has been well documented by an abundance of research studies addressing these variables. Hackett, Betz, Casa, and Roche-Singh (1994) found that self-efficacy beliefs were a contributing factor to

academic achievement of minority and female students in subject areas traditionally traversed by males. Research by Pajares and Johnson (1996) established that writing self-efficacy had a mediating influence on writing performance. Similar results were obtained when investigating mathematical abilities (Pajares & Kranzler, 1995).

Critical thinking has evolved from its roots in Socratic reasoning into an interdisciplinary educational objective with a copious number of definitions. In 1941, Edward Glaser in his seminal work, *An Experiment in the Development of Critical Thinking*, reintroduced this concept to the modern world. A perusal of the literature identified critical thinking as a skill set that impacts on the academic achievement of students. A longitudinal study conducted by Rucks (2002) spanning the undergraduate academic experience of students in four-year higher education institutions validated the import of critical thinking skills on academic achievement. The results of an investigation of the critical thinking skills of freshman and sophomore nursing students supported the effect of these cognitive abilities on the successful completion of their course of study (Smith 1995). Based on the aforementioned, the theories that guided this study are Bandura's Theory of Self-Efficacy (1997) and Glaser's Theory of Critical Thinking (1941).

Research Questions

Premised on the literature review this study seeks to investigate the following overarching research question:

Is there a difference between students who attended and graduated from charter high schools in Florida and students who attended and graduated from traditional high schools in Florida on their academic achievement, as measured by GPA, self-efficacy,

and critical thinking skills during their freshman year at four-year public Florida universities?

The following are the questions which stem from the aforementioned research question:

1. Does a charter high school education have an impact on the *academic achievement* of freshman students at four-year public Florida universities, as measured by *GPA*?
2. Does a charter high school education have an impact on the *self-efficacy* of freshman students at four-year public Florida universities, as measured by *The General Perceived Self-Efficacy Scale*?
3. Does a charter high school education have an impact on the *critical thinking skills* of freshman students at four-year public Florida universities, as measured by *The Watson and Glaser Critical Thinking Appraisal, Form S*?

Null Hypotheses

Premised upon the research question formulated above, the following null hypotheses was investigated in this study:

H_0^1 There is no difference between students who attended and graduated from charter high schools in Florida and students who attended and graduated from traditional high schools in Florida on their *academic achievement*, as measured by *GPA*, during their freshman year at four-year public Florida universities.

H_0^2 There is no difference between the *self-efficacy*, as measured by *The General Perceived Self-Efficacy Scale*, of freshman students at four-year public Florida universities who attended and graduated from a charter high school and freshman

students at four-year public Florida universities who and graduated from a traditional high school.

H_0^3 There is no difference between the *critical thinking skills*, as measured by *The Watson and Glaser Critical Thinking Appraisal, Form S*, of freshman students at four-year public Florida universities who attended and graduated from a charter high school and freshman students at four-year public Florida universities who attended and graduated from a traditional high school.

Research Hypotheses

Premised upon the aforementioned null hypotheses, the following hypotheses were research (alternative) hypotheses for this study:

- H_1 : Freshman students at four-year public Florida universities who attended and graduated from a charter high school had attained a higher of *academic achievement*, as measured by *GPA*, than freshman students at four-year public Florida universities who attended and graduated from a traditional high school.
- H_2 : Freshman students at four-year public Florida universities who attended and graduated from a charter high school attained a higher score on *self-efficacy*, as measured by *The General Perceived Self-Efficacy Scale*, than freshman students at four-year public Florida universities who attended and graduated from a traditional high school.
- H_3 : Freshman students at four-year public Florida universities who attended and graduated from a charter high school attained a higher score on *critical thinking skills*, as measured by *The Watson and Glaser Critical Thinking Appraisal*,

Form S, than freshman students at four-year public Florida universities who attended and graduated from a traditional high school.

Limitations of the Study

The following limitations indicate what this study did not investigate and serve to identify the existence of extraneous variables:

1. Demographics for this sample including age, gender, and ethnicity were utilized to describe the sample in this study, but were not included in the statistical analysis.
2. The degree of generalizability may be affected by participant response rate.
3. The time of year the research was conducted may have an effect on the results attained.
4. Self-reporting is only accurate to the extent the participants' respond accurately and honestly.
5. The type – gender, ethnicity, socio-economic status – and quality – previous scholastic aptitude – of the students may have an effect on the results attained.
6. The inability to randomize the sample may effect the generalizability of the results.
7. The type – externally managed or internally managed charter school or traditional high school – may have an effect on the results attained.

Delimitations of the Study

The following constituted the delimitations of the study:

1. The study was only conducted using freshman students attending four-year public Florida universities.

2. The study was only conducted using students who attended and graduated from either charter high schools or traditional high schools in Florida.
3. This study was causal-comparative by design, thus, limiting the randomization of the sample.

Definition of Terms

Charter school. Semi-autonomous K-12 public schools operating under a written agreement with the state, district, or other overseer. This contract delineates the organizational structure of the institution, the curricular objectives, and the methodology for measuring success. Although funded as traditional public schools, differing degrees of latitude from state and local laws and regulations are generic to this form of educational institution (Clark, 2002).

Academic achievement. An assessment to determine student learning as measured by GPA (Gifford, Briceño-Perriott, & Mianzo, 2006).

Self-efficacy. A score on *The General Self Efficacy Scale*; an optimistic sense of personal competence, pervasive in nature, which accounts for the veracity of motivation and accomplishments in all members of the human race (Scholtz, Gutierrez-Dona, Sud & Schwarzer, 2002).

Critical thinking. Five domains of metacognition as defined by Watson and Glaser including: inference, deduction, interpretation, assumption recognition, and argument evaluation (Wagner & Harvey, 2003).

Freshman. A student in his/her first year of study at a post-secondary educational institution.

Significance of the Study

The charter school movement, being a recent addition to the K-12 public school system, has vocal proponents and opponents (Bernstein, 1999; Finn, Manno, & Vanourek, 2001). Myriad studies have been initiated to determine the effect of attending a charter school on the educational processes of students. Yet, there exists a gap in the research when assessing the impact of a charter high school education on the academic achievement of students when they attend institutions of higher education.

Since continuing one's education after graduating from high school affords individuals exponentially enhanced career opportunities, the need to successfully traverse the postsecondary terrain is imperative (De Franseco & Jarousse, 1983). Thus, the need to assess the voracity of a charter high school education vis-à-vis its impact on academic achievement in a university setting, becomes pertinent to the literature expounding on the efficacy of the charter school movement.

This chapter briefly discussed charter schools and their efficacy as an educational institution. In addition, the constructs of self-efficacy and critical thinking were covered vis-à-vis academic achievement.

Chapter II of this study will review and discuss in greater details the related literature regarding charter schools (independent variable), academic achievement, self-efficacy, and critical thinking (dependent variables).

CHAPTER II
REVIEW OF THE LITERATURE

History of Education

The modern day educational system has been influenced by two didactic processes: the intellectual revolution in Ancient Greece during the fifth century BCE and the cathedral school movement coinciding with the medieval period of history.

Ancient Greece

Greek scholars in Ancient Greece were the first group of individuals to examine the world from a secular viewpoint, advocating a love of wisdom. Free thinking was encouraged; literature, history, science, math, and critical thinking skills were integral elements of Greek scholarship. This knowledge base formed the basis for many elements of the curriculum that is employed in modern day educational systems worldwide. Philosophical ideas developed by the Greeks are the underpinning for a wide range of educational imperatives upon which the philosophy of education is constructed. In addition, the Greeks introduced a new social culture to the world that was premised on the concepts of leisure and enjoyment. Music, drama, poetry, and comedy are indicative of the ignition of the literary and artistic flame that continues to generate artistic creativity, as well as expand the curricular offerings, allowing students exposure to a broad range of knowledge (Sharpes, 2002).

Socratic reasoning, the forbearer of critical thinking, was promoted as a means to attain intellectual honesty. Plato introduced the use of dialogue as the foundation for formal debate that dominated the epistemological realm for over two thousand years. Aristotle's use of reason and logic was the forerunner for empiricism and the positivist

philosophy that has been the basis of scientific methodology and the framework upon which educational imperatives are adjudicated (Sharpes, 2002).

The Medieval Era

The Medieval Era, divisible into three distinctive periods, the Carolingian, Ottonian, and the Capetian, had as its educational prototype the cathedral school, the predecessor to the medieval university. During Carolingian times, the educational model was monastic in nature, with education geared toward a religious life style within an ecclesiastical setting. It incorporated a literate culture, based on the seven liberal arts, which affected a new methodology of study in Europe and became the precursor to the educational components of the modern day curriculum. Religious studies was an important element of this design, while allowing for the inclusion of secular subjects within its schema. Character development, an integral part of the educational process, valued perfection in learning and virtue, promoting a balance between the worldly and saintly (Jaeger, 1994).

Court schools combined the axis of political power and the social aspects of life, and evolved under Charlemagne into the epicenter of intellectual activity. On a certain level, this is indicative of the activity found on the modern university campus. Court schools were not as tightly regulated as cathedral schools and individuality in the form of behavior and fashion were part of its distinguishing characteristics. Rhetoric, as a purely secular discipline, integral to the training of future civil administrators, was taught (Jaeger, 1994).

During the Ottonian period, education acquired an increasingly secular inclination, preparing future administrators for both the religious and imperial courts. The

curriculum underscored behavioral objectives, viewed through the lens of medieval humanism, within a liberal arts course of study. The Roman Catholic Church's (referred to hereafter in this study as the Church) integration into the administration of the Roman Empire impacted on the cultural mores and social values being promulgated within this educational environment. Thus, shifting the venue of education back to the cathedral school system, while availing the masses broader educational opportunities (Jaeger, 1994).

The study of virtues was an integral part of the curricular objectives. This subject was to impact positively on one's innate talents and behaviors, revealing the *nobility of the soul* and allowing man to manifest greatness. Additional external refinements, integrated within the educational curriculum of the eleventh century, included elegance of manner, friendship, and humor. Yet, Aristotelian reasoning, originally embraced by the Ancient Greeks, was opposed by the church during the Middle Ages, posited on the perception that logical thinking would be detrimental to religious observance. A Papal order was issued in 1210 prohibiting the teaching of Aristotle at the University of Paris. Thomas Aquinas's defense of reasoning, paved the way for the rescinding of these orders in 1240. The impact of broadening educational parameters allowed for more diverse learning experiences for the populace, leading to the eventual incorporation of the study of classical texts within the curriculum. These became the precursors that sanctioned the inclusion of secular subjects and awarded them an increasingly larger portion of the educational curriculum (Sharpes, 2002).

History of Education in the United States

Colonial America

The arrival of European pilgrims to the shores of North America necessitated the establishment of an educational system, premised on the English model, which incorporated a multi-tiered approach to instruction. In the home setting, children were taught basic literacy and skills endemic to the type of work undertaken by the family unit. Faith based education took place under the auspices of the church. The community instilled values and expectations among the youth, as well as establishing apprenticeships for those suitably inclined to successfully traverse that avenue of educational opportunity. The role of schools was relegated to providing the opportunity for the attendees to attain a proscribed level of mathematical proficiency and literacy; in conjunction with preparing for higher education opportunities specially chosen male students, who were being groomed for future leadership roles (Fraser, 2001).

The New Republic

Following the American Revolution in 1776, the new republic began to formulate its conceptualization of the educational process for its populace. The necessity to educate the citizenry to guard against tyranny was articulated by Thomas Jefferson. He posited a meritocracy where all non-slave children would be afforded a minimum of three years of free education, with those deemed worthy being given an opportunity for advancing their education. Ironically, his perception of those deemed worthy of instruction was reserved exclusively for White males. Jefferson's final contribution to education, accomplished after his retirement from public office, was the establishment of the University of Virginia (Sharpes, 2002).

Benjamin Rush, a contemporary of Jefferson, included in his version of educational imperatives a mandate that all government bureaucrats be graduates of a national university. Many of the recently liberated colonies followed these articulated ideas and incorporated in their newly created constitutions the necessity of establishing a free public school system to promote democratic principles among its populace (Spring, 2002).

Benjamin Franklin, having sojourned in England and France for an extended period, advocated for the concept of intellectual inquiry, constructed on the Socratic model. He conceptualized the first free library system in the embryonic United States, thus affording individuals the opportunity to be exposed to a wide range of reading materials. In addition, Franklin proposed a model of schooling that emphasized vocational education, developed and funded through governmental agencies (Sharpe, 2002).

The Common School Movement

The Common School had its genesis during the first half of the eighteenth century, founded on the prior rhetoric of Jefferson, Rush, and Franklin who advocated for a system of government sponsored education. The rise of a democratic, capitalistic society, no longer unified under the umbrella of one religion, required a centralized educational schematic that would embrace the emerging diversity of the American populace (Goetz, 1998).

Horace Mann, the famous sponsor of the Common School movement, premised his support for this genre of education on the following rationale: the universality of education as the guardian of culture and the initiator of national unity, leading to the

formation of youth into citizens who embraced American values (Fraser, 2001). He, more so than Jefferson, posited that plasticity inherent within human nature would allow for the molding of individuals, through education, into productive members of society. Thus, his vision was to grant equal access for the populace to educational opportunities that would extend beyond the three-year period promulgated by Jefferson (Brick, 2005). Mann foresaw that to ensure the upward mobility of society, education was an imperative. He realized that slavery, still actively practiced in the South, was being perpetuated through ignorance, and that education would help to foster equality for all the inhabitants of America (Grant, 1998).

The Common School Movement was not a centrally governed national entity, but a substantial number of loosely coupled local groups with a shared vision. Public funding for education and a standardized curriculum were two precepts integral to the success of this new educational endeavor (Rubinson, 1986).

Teaching as a profession was viewed with disinterest by many, leading to a scarcity of qualified educators. The need to extend the vocation to females was advocated by Mann together with his compatriot, Catharine E. Beecher. Seminaries were established to provide females with the skills necessary to be successful classroom teachers (Beecher, 1829). Beecher theorized that women, with their innate maternal instinct and willingness to work for a lower wage than men, would be the ideal solution to the rapidly increasing need for trained educators, a direct result of the Common School Movement (Fraser, 2001).

In addition to establishing teacher training colleges, Mann petitioned his constituents to allocate increased funding for public sector education. He accomplished

this dimension of his educational agenda through meeting with the myriad factions of the populace and convincing them of the efficacy of educating the youth to better serve society's specific needs. To the industrialists, his persuasive arguments highlighted the advantages of a better educated pool of future laborers that would impact positively on the economic health of factories. Mann's issuance of annual reports on the evolution of education extended his influence on instructional reform beyond the geographic boundaries of Massachusetts (Gibbon, 2002).

The Common School, non-sectarian in design, would be the environment within which Mann's crusade for egalitarian education would be actualized. Social reform, democracy, and political stability would be by-products of a school environment that promoted basic literacy and the universality of education. Increased levels of state funding, as well as an ample supply of educational materials aligned with the newly established curricular objectives, would ensure an atmosphere that would be conducive to learning (Sharpes, 2002).

The Progressive Education Movement

The Progressive Education Movement heralded the next major development in public education in the United States. The foundational imperative of this educational theory situated the child at the center of the learning process necessitating that he/she take an active role; this being in contrast to the learning experience that was until this point teacher driven (Dewey, 1938).

Curricular changes inherent in this evolving educational imperative were driven by the emerging social science research methodology. John Dewey, a prominent advocate of the Progressive Education Movement, posited that an organic relationship existed

between experience and education and that the social science research paradigm would be the model best aligned to investigate this theory (Seals, 2004).

Dewey defined education as the reconstruction of experience, which in turn added to the meaning of that experience, and facilitated one's ability to direct the course of ensuing experiences. Experience, as demarcated by Dewey, need not be tangible in nature, but it must involve an interaction between oneself and another individual or the environment. The effect of this interaction was dialectical, with implications for both participants (Rodgers, 2002). The practical application of this theoretical construct, involved engaging students in authentic real world issues, to facilitate the development of their problem-solving skills. Dewey hypothesized that this would foster within students, the desire and ability to be active participants in a democratic society (Deblois, 2002).

This individualistic perspective on education was a Socratic imperative, clearly announced in his maxim, "know thyself." In the eighteenth century, Rousseau recommended that knowledge acquisition be child-centered and pragmatic. Education, as a student driven, experiential imperative, was expanded upon in the works of Pestalozzi and Froebel. Dewey, in addition to being a proponent of learner-centered education, recognized the psychological and social characteristics contained within a child. He was cognizant that based on those dimensions, effective education would require understanding how a child's interests, innate abilities, and habits could be channeled to culminate in her/his productive integration within society (Henson, 2003). Adjustments made within the school environment on the educational processes must impact on the social context to effect a transformational change to society (Dewey, 2002).

Unlike many of his contemporaries, Dewey was opposed to the hierarchical system of centralized supervision found in many schools. He felt this impeded progress, instead advocating for curricular freedom that would allow educators to reflect on their work product. Reflecting required a duality in approach, contemplating the experiences that lead to learning, as well as the educational experience itself. Dewey taught educators to learn from those occurrences by pondering, exploring, reviewing, and questioning (Seals, 2004). Dewey did not view education as a means for training the innate capabilities of a child, but as a method for cultivating new social capabilities that were essential to the establishment and maintenance of a democratic community (Lagemann, 2000).

Public Education from the Mid -Twentieth Century

Brown vs Board of Education of Topeka, Kansas

Reflecting on the past fifty years of educational progress in the United States requires examining several key events that have impacted on the new millennium. The movement for racial equality in American society affected the public school environment by the seminal Supreme Court case of *Brown vs. Board of Education* occurring in 1954. The existent *separate but equal* system of education had not proven efficacious for Black students and the Supreme Court negated this doctrine, finding it in violation of the equal protection clause of the Fourteenth Amendment of the U.S. Constitution. Directly resulting from this Supreme Court ruling a policy of forced desegregation of the public school system was created. Yet, additional initiatives in the form of tracking students, gifted programs, and magnet schools were instituted that indirectly perpetuating segregation (Smith & Kozleski, 2005).

Elementary and Secondary Education Act

In 1965, the federal government recognized that equality, vis-à-vis educational opportunities for all students, had not been actualized and that additional financial support would be required to achieve that goal. Title I funding, the focus of the *Elementary and Secondary Education Act* [ESEA], was enacted to apportion federal money toward educational programming that would increase the achievement levels of the underperforming sector of students. This represented at the time, the single largest allocation of federal funds for primary through secondary education (Tirozzi & Uro, 1997).

The ESEA went through several revisions, continuing to focus on closing the educational divide between underprivileged students and their higher achieving peers. A significant portion of this new legislation demanded proof that money allocated for Title I programs was being utilized for the targeted population as supplementary to the general allocation of educational funding (Wong & Nicotera, 2004). A requirement for annual effectiveness assessments was an additional innovation of this legislation, creating a precedent that would lead to demands by government officials for increased levels of accountability by those institutions receiving funding (Borman, 2000).

Nation at Risk: The Imperative for Educational Reform

The questionable success of the ESEA to achieve educational equality for all students, coupled with the failure to completely rid the United States of de jure segregation, warranted a need to reexamine the existing federal educational policies. In 1983, the National Committee on Excellence in Education issued a report entitled, *A Nation at Risk: The Imperative for Educational Reform*. This treatise documented a

pervasive mediocrity in the educational outcomes of students in the United States and initiated a clarion call for a transformation of the academic system. Citing data that revealed the dismal abilities of American students when compared to students from other industrial nations, in conjunction with data showing lower levels of student preparedness for higher education, the government committee demonstrated a clear need for new pedagogical initiatives (Nation at Risk, 1983). These changes were unambiguously delineated in the report and included: increasing high school graduation requirements, delineating exacting and measurable performance norms, developing a more efficient use of the academic year, and enhancing the training, remuneration, and accountability of teachers (Viteritti, 2004).

The *Nation at Risk* report aligned with the Regan administration's goal of decentralizing the responsibility for education from the federal government to the states. Included in this aspiration was a reduction of federal spending for education, while demanding increased levels of accountability. Standardized testing to determine academic achievement was suggested as a means of demonstrating student progress and as a tool for a national comparison of students. Curricular objectives requiring assessment targeted the core subjects and included critical thinking skills (Wong & Nicotera, 2004).

Improving America's Schools Act

In 1994, a reauthorization of the ESEA in the form of the *Improving America's Schools Act* [IASA] was initiated. The purpose of this new dictum was to ensure that Title I funding was achieving its professed objective of closing the achievement gap between the advantaged students and those who occupied the lower echelons of the socio-economic continuum. Changing the locus of control to the local educational

authority was viewed as an advantageous way to assure compliance with the mandated regulations (McDonald, 1999).

In order to actualize the goals of the *Nation at Risk* and ESEA legislation, states embraced standards-based curricular objectives and instituted increased levels of standardized assessments. IASA mandated that these same features be actualized for students receiving Title I funding. Adequate yearly progress needed to be demonstrated at all schools receiving these monies, and plans were instituted to remediate those schools not meeting this benchmark. Any school not demonstrating adequate yearly progress for two consecutive years necessitated the district taking action. Several corrective plans were available including the following: withholding Title I funding, diminishing the degree of decision making at the local school level, and offering alternative educational opportunities for the underserved students (DeBray, McDermott, & Wohlstetter, 2005).

Goals 2000: Educate America Act

The next major legislative initiative to impact the educational arena was *Goals 2000: Educate America Act*, enacted by the U.S. Congress in 1994. The rationale for this federally mandated plan was to create a national framework to improve the educational process in the public school system. A portion of this bill established specific pedagogical objectives to be accomplished by the year 2000. Many of these goals had been enumerated in prior legislation including the following: ensuring a literate populous, increasing the percentage of students graduating high school, achieving high standards in core academic areas, and assuring that programs were available for teachers to advance their skills and knowledge (Goals 2000, 1994). The need to accurately assess these

objectives in order to evaluate the effectiveness of the mandate became a focal point of concern and responsibility for all stakeholders (Campbell, 2003).

Another feature unique to *Goals 2000* was the clearly defined roles of the federal, state, and local governments that would culminate in an improved educational experience for all students. The framework ratified by Congress and the Senate maintained state and local control, while assigning the federal government the tasks of support and facilitation (Riley, 1995). This content driven systemic reorganization availed the states traditional levels of control, while federally mandating clearly demarcated educational objectives. In addition, by obtaining political consensus for the delineated goals, the federal government was committed to providing adequate funding to support their aims (Cookson, 1996).

Goals 2000 differed from previous educational reform endeavors by not earmarking funds for categorical assistance programs targeted to specific groups of students. Instead, the legislation embraced a holistic need for pedagogical transformation that would impact all students. To evaluate the success of the implementation of the objectives, performance accountability methods were required to appraise the impact of these new initiatives on academic achievement (Stevenson, 1995).

No Child Left Behind Act

In 2002, the *No Child Left Behind Act* [NCLB] was enacted under the jurisdiction of the Bush administration. One of the main foci of this legislation was a major revision of the ESEA. Aligning educational funding with enhanced levels of accountability increased the federal government's role in education; paradoxically, this was the antithesis of the intent of those who codified the U.S. Constitution. The requirement for

schools to annually assess the academic progress of students in specifically designated core subject areas resulted in the creation of curricular objectives that focused on the assessment process to the detriment of knowledge acquisition and skills building (Rosenbusch, 2005). Increased academic expectations dictated by the federal government were exasperated by the lack of funding needed to effectively implement these mandates (Byrnes, 2005). Yet, President Bush was able to persuade Congress of the efficacy of the demanding legislation, while only guaranteeing seven percent of the monies necessary to underwrite the cost of the program (Manna, 2006).

Tying NCLB to the perceived inequities in the quality of instruction being delivered to students inhabiting the lower echelons of the socio-economic scale, as well as those with special needs, allowed for broad-based support of the legislation. The debate centered on the criteria that would identify schools requiring remediation, with little debate over the extent of governmental involvement in the educational process (DeBray, McDermott, & Wohlstetter, 2005).

The need to demonstrate annual yearly progress was mandated. Failure to achieve this goal at the school or district level would result in availing parents of the opportunity to choose a different school for their offspring (Howell, 2006).

Charter Schools

Several alternative forms of school choice were created to achieve the goals delineated by IASA and NCLB for students enrolled in failing schools; included among the options were charter schools. The charter school movement was launched through the combined efforts of a diverse group of civic, labor, and educational leaders to remediate the one-size-fits-all educational system that evolved during the industrial

revolution (Finn, Manno, & Vanourek, 2000). Allowing a free-market structure, liberated from a centralized bureaucratic management model, while availing all stakeholders a voice in the educational process, was the philosophical underpinning upon which the charter school movement was premised (Lazaridou & Fris, 2005). Chubb and Moe (1991) posited that increased levels of autonomy would allow a school to effectively educate the students under their jurisdiction, potentially leading to enhanced levels of academic achievement; thus validating the foundation upon which the charter school movement was initiated.

The *Nation at Risk* report issued under the Regan administration created a conduit for the school choice movement that would eventually include school vouchers and charter schools. President Clinton in 1994 reauthorized the ESEA, including an addendum entitled the *Federal Charter School Program*. This innovative legislation provided needed start-up funding for the fledging charter school movement. In 1998, the *Charter School Expansion Act* [CSEA] amended the preceding legislation. The NCLB Act of 2002 aligned itself with the charter school concept, embracing the school choice movement as a vehicle to provide enhanced educational opportunities for students. NCLB contained two key clarifications of the CSEA – a redefinition of who was eligible to apply for a grant, and a prohibition against local educational agencies deducting fees from any monies received by eligible grant recipients (Clark, 2002).

In 1991, the actualization of the charter school concept had its genesis in Minnesota, through the passing of legislation that authorized the formation of eight schools. Yet, only one, City Academy in St. Paul, opened its doors that year to welcome students. The following year, California followed Minnesota's lead and crafted a

legislative initiative that allowed the creation of schools of that genre (Finn, Manno, & Vanourek, 2000). Currently, California has taken the lead in charter school education with over 180,000 students enrolled (Schneider & Buckley, 2006).

The state of Arizona passed the most robust charter school statutes in the nation. Elevated levels of flexibility, in conjunction with a charter term of fifteen years, have provided the stability necessary for furthering academic goals. As of 2005, 509 charter schools were operating in Arizona and were in compliance with more than 85 state regulations (Allen & Marcucio, 2005).

Following ten years of grassroots effort, the Florida legislature passed Statute 1002.33, sanctioning charter schools as legal entities within the state's public system of education. Core components of the statute included the following: local school board approval for charters operating in its district, operational monies being funded at the same level as those of traditional schools, and autonomy issues to be individually negotiated in the school's founding charter. Continually evolving legislation addressed the removal of a cap on charter school proposal approvals, the creation of a charter school capital outlay trust fund, and more rigorous levels of accountability for students (Hassel, Terrell, & Kowal, 2006).

In 1996, Florida's first five charter schools opened their doors, thus commencing a burgeoning association with this form of educational institution (Sass, 2006). By the 2005-2006 academic year, that number had expanded to 334 charter schools, providing educational opportunities for over 92,000 students (Hassel, Terrell, & Kowal, 2006).

The charter school, although a recent educational phenomenon, shares similar characteristics with other forms of schooling. Charter schools are locally controlled,

encouraging parental involvement in the educational process, paralleling the foundational design of the public school system that began in the early nineteenth century. Similar to a magnet school in providing parents a choice in regard to the type of instructional experience a student would attain, yet different in that a charter school retains an enhanced level of autonomy from governmental mandates (Manno, Finn, & Vanourek, 2000).

According to Chubb (as cited in Brandt, Willie, Rosenberg, & Shannon, 1990), the efficacy of charter schools is premised on several internal organizational issues. The degree of local autonomy afforded to the school leadership, allowed for creating and promulgating a clearly delineated vision and mission to all stakeholders. Decision making was inclusive, cultivating an enhanced degree of professionalism, and culminating in high expectations of academic success. An effective organizational structure, vis-à-vis positive leadership, coherence, professionalism, and goal orientation, had a definitive impact on the success of this genre of educational institution.

Academic Achievement

Academic achievement has been defined in a multitude of ways, depending on the variables being studied. Degree attainment was indicative of academic achievement in a study conducted by Perry, Hladkyj, Pekrun, Clifton, and Chipperfield (2005). Anderson (2003) posited that student success, often adjudicated by grades, may differ by disciplines. The researcher found that faculty from the Department of Business Administration regarded cognitive ability as proof of academic achievement, while faculty from the Department of Social Welfare prized non-cognitive criteria. Gifford, Briceño-

Perriott, and Mianzo (2006) employed cumulative grade point average [GPA] as an indicator of academic achievement in their study on student retention.

Gender

Academic achievement and gender have been investigated in various studies. According to Chee, Pino, and Smith (2005), men and women attain equal levels of academic achievement in the higher education arena. Yet, the researchers found variables that may have impacted on this finding, including ethnicity and SAT scores.

Nowell and Hedges (1998) performed a meta-analysis of research studies that investigated gender differences vis-à-vis academic achievement. The investigators concluded that females showed a stronger propensity toward verbal abilities while males demonstrated increased levels of mathematical acuity. Yet, the researchers found diminishing gaps in male/female academic achievement in the areas of science and math. This may be due in part to the effort expended by educators to attain achievement parity across gender in these subjects. Goodwin's (1997) research findings, aligned with those of Nowell and Hedges, concluded that males showed a surprisingly small advantage over females in math and science when compared to data from thirty years ago.

Socio-Economic Status

Researchers have examined the impact of socio-economic levels on student achievement. Generally, although there are often other confounding variables, the results have shown a correlation between socio-economic status and student achievement. Chau-Klu, Rudowicz, Graeme, Xiao, and Kwan (2001) conducted a study of university students in Hong Kong. Their intent was to investigate the relationship between social class and critical thinking skills, which have been shown to directly impact academic achievement.

The results attributed higher social class to increased levels of critical thinking and learning effort, with the reverse being true of those students occupying a lower level of social standing.

Xin (2000) described the differences between socio-economic status and academic achievement as the “socio-economic gap.” The study this researcher conducted reiterated the impact of socio-economic status on student achievement. The results obtained were particularly significant, due to the fact that Xin controlled for the mitigating influences of student background characteristics including gender, number of siblings, and single parent families, as well as, school characteristics such as school size and parental involvement. Another study corroborating these results was conducted by Okpala, Okpala, and Smith, (2001). The findings of this investigation indicated that, neither parental involvement in the school environment, nor monetary expenditure on instructional materials, influenced the achievement levels of the students. The only variable found to be statistically significant was the socio-economic status of the individuals under study.

Ethnicity

The subject of ethnicity and academic achievement, often investigated in conjunction with socio-economic status issues, has been addressed in a multitude of studies. A study by McCallum and Demie (2001) found that ethnic minority students in an Inner London borough had somewhat lower achievement scores than other students. The authors established a weak correlation for this finding with the lower socio-economic strata these students occupied. Nonetheless, it was difficult to reach a definitive conclusion premised on one variable, for the poorer scholastic showing of the research

participants. Gayle, Berridge, and Davies (2002) reached a similar conclusion when investigating the rate of university attendance and degree attainment of students in England. Although the data was to some extent indicative of lower academic achievement rates premised on ethnicity, the researchers concluded that other variables displayed a stronger influence on the question being investigated.

Lucas and Good (2001) found inconsistent results when evaluating track mobility using ethnicity as a variable. When investigating subject specific tracking, they determined that race did not appear to be influential in English placement. Yet, in mathematics, minorities followed qualitatively different track mobility than White students. These conclusions support additional studies cited by the authors depicting divergent results. Gamoran and Mare (as cited in Lucas & Good) found net advantages in the track placement of the African-American students they investigated, while Oakes (as cited in Lucas & Good) reached the opposite conclusion. In a study conducted by Ansalone (2001), tracking resulted in a negative effect on not only the educational development of minority students, but, also on their future economic opportunities.

Kao and Thompson (2003) found that a disproportionate percentage of ethnic minority students were placed in the lower track. The investigators' review of the literature revealed two key theories for this inequity. The first addressed cultural differences, vis-à-vis the value placed on education intrinsic to diverse ethnicities. The second correlated with parental influences on the educational processes of their offspring.

Ogbu (as cited in Epps, 1995) discussed the lag in academic attainment of African-American students. He contended that racial stratification caused oppositional attitudes toward the educational process, creating a non-conducive environment for

positive educational outcomes. Yet, Slaughter-Defoe and Schneider (as cited in Epps, 1995) investigated the academic success of middle class African-American children, finding their adaptation to the school environment corresponded with those of their White counterparts. Thus, investigating ethnicity as the causation of poor academic achievement may not provide an accurate analysis of this issue.

On a positive note, empirical research has shown that the gap between the academic achievement of ethnic minorities and non-minorities in grades K-12 has narrowed in the last three decades. Yet, in the higher education arena, White students are twice as likely to attain bachelor's degrees as African-Americans, Hispanics, and Native Americans, even when controlling for socio-economic status (Kao & Thompson, 2003).

Charter Schools

Myriad studies have been conducted to evaluate the efficacy of this type of academic venue with varied conclusions. A report released in 2006 by the Charter School Achievement Consensus Panel [CSACP] found that there was no one method of research that was efficacious when studying charter schools. In addition, the CSACP found a lack of validity in generalizing findings from one genre of charter school to another. Lin (2001), after conducting a meta-analysis of charter schools from three states, found discrepancies in some of the data reviewed. Nonetheless, the researcher concluded that this form of educational environment fulfilled its expectations.

Garrison and Holifield (2005) studied charter school principals' perceptions of the success of the charter school mission in their particular educational institution. Five constructs of an effective school were evaluated, including the use of student

achievement as a tool for program assessment. The conclusions extrapolated indicated that the schools were meeting the goals articulated in their charters.

A study between charter schools and comparable traditional schools was conducted by Hoxby (2004). Students were carefully selected, with the intention of eliminating much of the criticism of other studies which claimed that charter school students were a unique population, thus impossible to compare to students attending traditional schools. Hoxby matched charter school students with their counterparts at the nearest public school, as well as carefully controlling for socio-economic status, and environmental, parental, and student variables. The findings concluded that students in charter elementary schools achieved higher scores in reading and math when compared to similar students in conventional public schools. There appeared to be a direct correlation between the number of years the charter school was in operation and the students' levels of improvement, vis-à-vis academic achievement.

Heaggans (2006) posited that charter schools often serve an at-risk, minority population and are instrumental in perpetuating a segregated educational system, outlawed in 1954 by the landmark Supreme Court case of *Brown vs. The Board of Education of Topeka*. Harmon, Bingham, and Hood (as cited in Heaggans) conjectured that the efficacy of a charter school education, when compared to a traditional public school, has not been adequately established. Following the researchers' analysis of standardized test scores of North Carolina students during the 1999-2000 academic year, they concluded that the academic progress of students attending charter schools lagged their peers attending public schools, when controlling for ethnicity. Bowman (2000) using five years of test data acquired by Michigan concluded that students educated in

conventional public schools outscored their peers attending charter schools in reading, writing, math, and science.

The reliance on standardized testing to prove the efficacy of the educational process has been detrimental to all genres of schools, including charter schools. Yet, much of the research conducted to determine the effect of attending a charter school on students' academic achievement has been premised on standardized test results (Lin, 2001). Manno (as cited in Lin) advocated for the value of charter schools, while acknowledging the necessity to align curriculum with governmental mandates, thus limiting the effectiveness of the educational experience. He concluded that the dependence on standardized testing to prove academic proficiency has impacted negatively on the entire premise upon which the charter school movement was situated.

Self-Efficacy

Social Learning Theory

Self-efficacy finds its genesis in the Social Cognitive Theory, which itself is a corollary of the Social Learning Theory. Social Learning Theory is classified as a form of behaviorism, originally formulated by behavioral and social psychologists. Behaviorism, a group of psychological theories, was developed to facilitate the understanding of human and animal behavior. John Watson publicized his new theory in 1913, incorporating a rigidly mechanistic approach toward comprehending human behavior. Watson hypothesized that behavior, defined as observable actions, could be elucidated by stimulus-response sequences (Berk, 1996, chap. 1). Contiguity between stimulus and response was deterministic of learning acquisition. This variable, within the framework of Social Learning Theory, elicited heated debate among behaviorists focusing on the

possible existence of mediating factors between stimulus and response that in turn would regulate behavior. Two schools of thought evolved, one positing that behavior is consequence driven through the process of reward and punishment; the second theory employs feedback as the primary factor governing behavior antecedently (Rilling, 2000).

Social Learning Theory was officially introduced in 1941, with the publication of Miller and Dollard's much heralded volume *Social Learning and Imitation*. Integral to their principles of learning was the interrelationship between reinforcement, punishment, extinction, and imitation of models. The foundational tenet for their book explained the relationship between modeled, observed behaviors and environmental reinforcements vis-à-vis their affect on animal and human learning. The innovation inherent in their theory, focused on the expanding multidirectional relationship between environment and behavior, with the additional construct of an internal mediating variable. Consequently, work in behaviorism shifted its emphasis from theory development to empirical studies (Woodward, 1982). Currently, social learning theory has advanced a subset of hypotheses. These are premised on social learning principles that underscore human cognition as the mediating variable between stimulus and response; thus, situating human control as the determinant of behavioral response to stimuli (Woodward).

In 1963, Bandura and Walters expanded the boundaries of Social Learning Theory with the publication of their book, *Social Learning and Personality Development*. This text incorporated the concepts of observational learning and vicarious reinforcement within the Social Learning Theory (Pajares, 2002). Continuing to evolve his theory, Bandura was cognizant of a key element that was absent from the learning theories being promulgated at the time. He expounded on that elusive variable in his groundbreaking

article entitled, “Self-efficacy: Toward a Unifying Theory of Behavioral Change” (1977), wherein he posited the concept of self-beliefs. These beliefs, he surmised, allow people to apply a measure of control over their thoughts, feelings, and actions, resulting in their being both products of and producers of their personal environment and social systems (Pajares).

Social Cognitive Theory

A revolutionary conceptualization of human functioning was formulated by Bandura in 1986, with the publication of his book, *Social Foundations of Thought and Action: A Social Cognitive Theory*. It attributed a core role to cognitive, vicarious, self-regulatory, and self-reflective processes in human adaptation and change. This work precipitated an evolutionary change in the universally held construct that people are reactive beings formed by environmental forces and driven by hidden internal impulses. This new supposition of human performance was proactive, self-organized, self-regulated, and introspective; affording cognition a role as the mitigating factor in transformational adaptability (as cited in Pajares, 2002).

This viewpoint, holistic in construct, allowed for human functions to be influenced by interactions between behavior, environment, and personal variables. This hypothesis created the basis for Bandura’s conceptualization of reciprocal determinism. He defined this as the multidirectional interaction between environmental issues, behavior, and personal factors represented by cognitive, affective, and biological events, that result in a triadic, dynamic reciprocity (Bandura, 1999).

Social Cognitive Theory identifies three varieties of environmental structures: imposed, selected, and constructed, representing increasing levels of changeability that in

turn require corresponding intensities of personal agency. Imposed environments, identified within the two classifications of physical and socio-structural, allow for a modicum of control over their existence; yet, one can be deterministic in approach and reaction to this genre of environment. The selected environment is designated and activated by appropriate courses of action, resulting in the revelation of the latent potentiality concealed within the environment and its dependency for actualization on human behaviors. Construed environments are created by individuals within the context of social and institutional systems. These three variant environments impact on the reciprocal causality among the triadic components – cognitive, affective, and biological – (Bandura, 1977).

Bandura (1998) gave voice to fortuity which precipitates the interaction of events that converge to influence the direction of one's life. The affect of these chance encounters is dependent on the bidirectional interplay of personal attributes and the social environment within which a person operates (Bandura, 1982).

Self-Efficacy Theory

Bandura (1997), in his seminal text, *Self-Efficacy: The Exercise of Control* established the theoretical perspectives of self-efficacy. The need to control the events that impact one's life is pervasive in all actions that a person initiates. Ambiguity when faced with major decisions is disconcerting. An individual's motivational intensity, affective states, and actions are governed to greater extent by what he/she believe rather on dispassionate truth. Bandura concluded that this form of beliefs, which he entitles *efficacy*, is the nucleus of action. Efficacy beliefs adjudicate multi-facets of a person's persona including the direction undertaken in the pursuit of a predetermined action, the

effort expended, the quantity of perseverance invested when obstacles and failures are encountered, the resilience to adversity, whether thought processes are encumbering or efficacious, the intensity of stress or depression produced in challenging situations, and the level of accomplishment attained.

Bandura (1997) differentiated between other forms of influence generated by an individual. Self-concept, defined as a composite vision of one's being that is formulated through experience and feedback from others, is viewed as less complex construct. Self-efficacy unlike self-concept is variable both inter and intra-domain, vacillating at diverse levels dependent upon the circumstances encountered. Self-esteem, the judgment of one's self worth, is incongruous to efficacy's judgment of capability. The need to deal effectively with one's environment – effectance motivation – is created through the interaction between cumulative knowledge acquisition and the skills in managing the environment. Self-efficacy differs in its more conditional and contextual perspective. Proxy control, the ability to employ others in positions of power to effect desired changes, requires a relinquishing of control with the potential of causing vulnerability. Efficacious individuals impatiently demand of themselves, unwilling to place their faith in the domain of others. The generative capacity of self-efficacy is not contingent on one's skills level but on the orchestration of those abilities.

The self-efficacy approach to personal causation itself is multidimensional requiring different scales of measurement. These instruments identify the upper strata of perceived self-efficacy following a continuum to lower levels. A psychometrically sound set of self-efficacy scales has been developed that is congruent with self-efficacy theory and methodology (Bandura, 1989).

Academic Achievement

The majority of research studying self-efficacy and academic achievement has addressed the correlation between the two variables within the context of predictive values. Yet, students constrained by their abilities, as well as a false belief in their capabilities has not proven to be efficacious vis-à-vis academic achievement. In addition, causality has not been clearly established, leaving unanswered whether academic achievement fosters self-efficacy or the reverse (Pajares, 1996).

Bong and Clark (1999) defined self-efficacy in the realm of academic achievement as consisting of a cognitive evaluation of one's abilities premised on mastery criterion in a particular domain. Self-efficacy beliefs are task specific and individualistic, thus research in this genre consists of a student's perceived scholastic capability of achieving clearly delineated goals, rather than a cross-student comparison (Zimmerman, 1995).

In 1994, Hackett, Betz, Casa, and Roche-Singh noted the limited number of females and non-Asian ethnic minorities employed in the engineering field. To understand the factors impacting this, the researchers conducted a study to determine the effect of self-efficacy on academic achievement of females and ethnic minorities in post secondary engineering programs. Conclusions extrapolated from the data collected supported the positive impact of self-efficacy on academic achievement. When comparing the self-efficacy scores of female students and their male counterparts, no difference was observed. Yet, lower levels of self-efficacy were found among Mexican-American students.

Pajares and Johnson (1996) conducted a study addressing writing self-efficacy and its importance on writing scores. When controlling for the extraneous variables of gender and writing aptitude, a correlation between writing scores and self-efficacy was evident. Similar results were attained in an investigation of mathematical self-efficacy. Interestingly, general cognitive ability and mathematical self-efficacy had a comparable effect on performance in this domain (Pajares & Kranzler, 1995).

Bandura (1997) in *Self-Efficacy: The Exercise of Control* postulated that the effect of self-efficacy on academic achievement is multi-faceted. Included within this conceptualization is the inference that increased levels of self-efficacy contribute to student success through the mitigation of poor study skills and reduced levels of self-motivation. Bandura stated that students with positive perceptions of their self-efficacy would not be as stymied by their metacognitive capabilities and would be willing to take greater risks than their peers who possessed lower levels of this construct.

Socio-Economic Status

The impact of socio-economic status on an individual's degree of self-efficacy was addressed by Boardman and Roberts (2000). They demonstrated a correlation between self-efficacy and socio-economic status. The higher the individual's socio-economic status, the higher was his/her degree of self-efficacy. The authors posited that the socio-economic status of the person's neighborhood had the same or in some cases an additional mitigating effect on the degree of self-efficacy when compared to his/her personal socio-economic status. Tong and Song (2004) studied students attending a university in China to determine if there was a correlation between SES and scores on the General Self-Efficacy Scale. The investigators concluded that the research subjects

occupying the lower strata of the SES continuum demonstrated decreased levels of self-efficacy. An article by Bandura, Barbaranelli, Caprara, and Pastorelli (2001) concluded that increased SES raised parents' self-efficacy, vis-à-vis their ability to advocate for their children's academic development.

Gender

The issue of gender has been addressed in self-efficacy research within the educational domain. The general results attained, indicated an increased level of self-efficacy among males in comparison to females in academic disciplines pertaining to mathematics, science, and technology. Conversely, there was gender parity, vis-à-vis self-efficacy scores, when addressing areas relating to language arts. This finding is particularly intriguing when taking into account the recorded levels of academic superiority attained by females in this specific scholastic area. According to Pajares (2002b), there are various confounding factors that account for the disparity in results. Males and females have differing propensities when completing self-efficacy scales. Researchers have noted that males demonstrate increased rates of self-aggrandized responses while females are more modest in their perceptions. A second issue addressed the conventional avenue for assessing gender differences. This is orchestrated through the elicitation of confidence judgments of current academic skill attainment or positive task accomplishments. The variability in the generated data is attributed to gender differences in self-efficacy.

Another possible mitigating factor is the impact of stereotypical gender beliefs embraced by study participants and their influence on responses, as opposed to actual gender causation (Schunk & Pajares, 2002). These stereotypes, possibly generated by

parent and/or teacher expectations and school counselors, may discourage girls from pursuing traditionally male fields of study or occupations. The media is an additional contributing factor to this self-perpetuating image, through its conveyance of subliminal messages that reinforce typical gender roles (Pajares, 2002b).

A relationship has been established between gender and developmental level (Schunk & Pajares, 2002). Although little evidence has been acquired to demarcate efficacy levels of children enrolled in elementary schools, differences have been recorded as students transition to middle schools. This is particularly apparent for females, resulting in a diminution of their self-efficacy scores. Research has demonstrated that, when students receive clear performance feedback in reference to their aptitudes or progress in knowledge acquisition, gender variations in self-efficacy scores are not apparent (Schunk & Pajares).

Ethnicity

Within the construct of ethnicity, research findings have demonstrated differing conclusions. Research conducted by Pintrich and Schunk (as cited in Schunk & Pajares, 2002) found that minority students had lower levels of perceived competence than non-minority students. A limitation addressed in the study was that the socio-economic status of the students was not disaggregated from the data, thus potentially skewing the results. Graham (1994) conducted a meta-analysis of research on African American students and their motivation for academic achievement. Graham found that by controlling for the influence of the socio-economic variable, African American students had equal levels of achievement motivation as their White peers.

Stevens, Olivare, Lan, and Tallent-Runnels (2004) studied the impact of self-efficacy on the mathematical performance of Hispanic students. The research found lower levels of self-efficacy among Hispanic students when compared to their Caucasian counterparts. This finding correlated with lower levels of academic achievement in the realm of mathematics for students of Hispanic origin.

Critical Thinking

Evolution of Critical Thinking

Critical thinking as an intellectual endeavor had its genesis in Ancient Greece where the assiduous use of reasoning skills to resolve daily challenges was embraced. Socratic reasoning, a forerunner of the modern conceptualization of critical thinking, was developed by Socrates during the fifth century B.C.E. Dialectic, a questioning protocol inaugurated to facilitate the pursuit of truth and new knowledge through the analysis of statements, was the underpinning of Socrates' theoretical framework of cognition. Aristotle, in the fourth century B.C.E., authored books on logical thinking premised on Socrates' dialectic reasoning, emphasizing the study of the validity of thought (Sharpes, 2002).

Education in Medieval times stymied didactic thinking, instead embracing a dogmatic methodology that aligned with the degree of influence the Church held over academic matters. During the Renaissance, free thinking was reestablished with the advent of the secularly focused university where rationalism was promulgated as the preferred system for knowledge acquisition (Sharpes, 2002).

Centuries later, John Dewey (1933), in his text *How We Think: A Restatement of the Relation of Reflective Thinking to the Educational Process*, reestablished the import of logical reasoning as stated:

If we were compelled to make a choice between these personal attributes and knowledge about the principles of logical reasoning together with some degree of technical skill in manipulating special logical processes, we should decide for the former. (p. 34)

Glaser (1941) in his seminal work, *An Experiment in the Development of Critical Thinking* explained the cogency of teaching critical thinking to produce individuals who would participate in and contribute to the democratic process as active and competent citizens. This would afford individuals the ability to forge solutions to the social problems that plague society. He envisaged critical thinking as a three-prong activity that encompassed a predisposition to contemplate issues one experienced, an understanding of the methodology of logical analysis and reasoning, and the application of the aforementioned skill base. Glaser emphasized that the prerequisite to think critically was a thorough knowledge of the subject under discussion.

In 1956, Bloom devised a continuum of six learning objectives, of which four encompassed critical thinking skills: application, analysis, synthesis, and evaluation. Knowledge and conceptualization of the subject matter were considered integral to mastering Bloom's taxonomy (Bissel & Lemons, 2006). Bloom's original intent was to create a measurement instrument that would universalize learning objectives, thus allowing the communal use of test items at higher education institutions. His conceptualization addressed cognitive skills presented within a hierarchical structure

which required moving from concrete to abstract thinking and required mastery of the previous tier in order to advance (Krathwohl, 2002).

Critical thinking evolved into a governmental directive as part of the 1994 report, *Goals 2000: Educate America Act*. Goal 5.5 mandated an increase in the number of students completing a university with advanced skills sets in the areas of critical thinking, effective communication, and problem solving. These were seen as essential for ensuring that Americans would be able to successfully compete in the global marketplace and be productive members of a democratic society.

Critical Thinking Theory

Definitions of Critical Thinking

In order to understand the theory construction behind critical thinking, comprehension of its myriad interpretations is essential. Definitions of critical thinking are varied, premised on the skills set being demonstrated. Nonetheless, a collective emphasis conjoining conclusions and supporting evidence aids in an understanding of this construct (Williams & Stockdale, 2003). Facione (1986) elaborated on this description, adding the concepts of argument construction and evaluation to his delineation of critical thinking. Ennis and Norris (as cited in Giancarlo, Blohm, & Urdan) theorized that thinking skills and dispositions are quintessential to the conceptualization of critical thinking. Thinking dispositions incorporate an individual's intrinsic motivation to utilize critical thinking processes when problems are encountered, decisions are required, and ideas must be assessed (Facione, Facione, & Giancarlo, 1997).

Paul and Elder (2004) defined critical thinking as a process for improving an individual's quality of cognition by using the foundations innate to thinking and

prescribing scholarly standards upon them. Effective communication skills and problem solving techniques resulting in a negation of an egocentric viewpoint are positive outcomes of mastering critical thinking processes. Paul (2005) addressed the issue of substantive knowledge vis-à-vis critical thinking skills. He posited that knowledge acquisition requires a thorough understanding of the foundational concepts of each discipline. These concepts then form the bases for substantive knowledge which is attained through the utilization of critical thinking skills.

Watson and Glaser codified critical thinking within five domains of metacognition: inference, deduction, interpretation, assumption recognition, and argument evaluation (Wagner & Harvey, 2003). Facione, Giancarlo, Facione, and Gainen (1995) attributed Dewey with clearly articulating the efficacy of critical thinking, positing that there exists a predisposition to developing optimal critical thinking skills premised on seven interrelated emanations: truth-seeking, open-mindedness, the ability to analyze information, systemization, an inquisitive mind, self-confidence in the domain of critical thinking, and a predisposition toward this cognitive perspective.

Following decades of debate over the conceptualization of critical thinking, the American Philosophical Association (as cited in Facione, 1990) published the following statement premised on the results of its Delphi research study:

We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as the explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. Critical thinking is essential as a tool of inquiry. As such, critical thinking is a liberating force in

education and a powerful resource in one's personal and civic life. While not synonymous with good thinking, critical thinking is a pervasive and self-rectifying human phenomenon. The ideal critical thinker is habitually inquisitive, well informed, trustful of reason, open minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and circumstances permit. Thus educating good critical thinkers means working toward that goal. It combines combining good critical thinking skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society (p. 2).

The definition of the American Philosophical Association addressed not only the cognitive, but also the affective elements of critical thinking. This aligned with Bloom's revised taxonomy, developed four decades later, that included reflective cognitive processes within its structural hierarchy (Krathwohl, 2002). Facione, Facione, and Giancarlo (2000) hypothesized concerning the affective elements within the critical thinking paradigm in their study addressing a predisposition toward this skill set.

Efficacy of Critical Thinking

Bonds (1993) expounded on the imperative of attaining and becoming proficient in the domain of critical thinking. He posited that these skills allow students to develop alternative perspectives to those they embrace, in order to maximize choices through analyzing differing opportunities and viewpoints. In addition, critical thinking entails the

realization of the subjectivity inherent in the differing opinions being presented and requires the student to investigate the alternative interpretations and make decisions more objectively.

Metzger (2006) addressed the issue of critical thinking in the business world, while comparing the consequences of short-sighted decision making to systems thinking. Senge (1990) defined systems thinking as entailing the visualization of the interrelationships between the different parts of a system and making a decision knowing its diverse impact. Metzger criticized corporate America for its myopic objectives that deprived it of the ability to be competitive in the global economy.

Academic Achievement

Phillips and Bond (2004) theorized concerning the efficacy of critical thinking skills for students and declared it essential to successfully traversing the post secondary educational terrain. Yet, premised on the differing perspectives of this cognitive initiative, disappointing results of critical thinking skills acquisition were attained. Facione, Giancarlo, Facione, and Gainen (1995) asserted that incoming university freshman demonstrated open-mindedness and inquisitiveness but, lacked the proficiency in systematicity and truth-seeking, thus, limiting their potential for knowledge acquisition.

Rucks (2002) investigated the effect of critical thinking on academic achievement in a longitudinal study. Incoming freshman were administered a pre-test measuring their proficiency in this skills set, and post-tested at the completion of their undergraduate course of study. Rucks found that critical thinking skills showed a statistically significant improvement on the post-test. In addition, the researcher found a positive correlation

between GPA and improved critical thinking ability. Smith (1995) evaluated the critical thinking skills of freshman and sophomore nursing students using the *Watson Glaser Critical Thinking Appraisal* [WGCTA]. The results obtained validated the relationship between critical thinking capability and academic achievement. Students with higher GPAs attained higher scores on the WGCTA.

A research study conducted by Jenkins (1998) investigated the effect of critical thinking skills using the WGCTA on test results over the duration of a university level auditing class. Jenkins found that only on the final two examinations was there evidence of the effect of critical thinking skills on the grades attained. The researcher attributed this to the improving critical thinking abilities of the students as the course progresses.

Collins and Onwuegbuzie (2000) conducted a study of graduate students from various academic programs to ascertain if their critical thinking abilities effected their academic achievement in a research course in which they were enrolled. A moderately positive correlation was found between critical thinking skills and scores obtained on midterm and final examinations.

Socio-Economic Status

The influence of family background on critical thinking abilities was evaluated in a study conducted by Chau-Klu, Rudowicz, Graeme, Xiao, and Kwan (2001). Studying the critical thinking skills of university students in Hong Kong, the researchers found that students whose family was situated in the upper echelon of the socio-economic paradigm exhibited higher levels of critical thinking than students whose parents had fewer resources.

Tsui (2003) posited that students from lower SES backgrounds entered school with decreased levels of social capital than their counterparts dwelling in higher SES households. One of the results of reduced quantities of social capital was a corresponding lower critical thinking skills set. Tsui's conceptualization of the impact of social capital on students from differing SES backgrounds segues with Lareau's (2003) discussion of social stratification and its effect on the "natural growth" of children. Parents inhabiting the middle to upper class of the SES continuum sublimely practice childrearing that promotes "concerted cultivation," availing their offspring of opportunities that develop diverse skill sets, including critical thinking (Lareau).

A study by Dumais (2002) supported Tsui's and Lareau's hypothesis. Dumais investigated the effect of cultural capital on the academic achievement of male and female eighth grade students in the United States. The results indicated that cultural capital had a positive and noteworthy effect on the grades of female students. Since cultural capital is found more abundantly in those who reside in the higher socio-economic spheres, and cultural capital is valued in the educational environment, it was not surprising that a correlation was found between cultural capital and academic achievement.

Chapter III will discuss the methodology, target population, sampling procedures, methods for data collection, and data analysis. The research questions and the null and research hypotheses will be reviewed.

CHAPTER III

METHODOLOGY

Philosophical Perspective

The foundational imperative of this research study is positivist by design. The purpose of science from a positivist perspective is to facilitate in the formation of a coherent model of the world. Premised on experimentation that garners consistent results, constructs are formulated to elucidate those regularities. An underlying imperative of positivism requires the direct observation of the phenomenon under investigation (Slife & Williams, 1995). Positivist query is focused on discovering infallible and universal laws, accompanied through the accumulation of and conjoining of fragments of knowledge (Clark, 1998).

Research is inherently interpretive. Positivism is situated within the quantitative research methodology, requiring statistical analysis of the data collected. The correlational or causal relationships between variables are investigated and the results are generalizable to a larger population (Salkind, 2003). Research methodology, consisting of the processes and procedures employed in the study, directly correlates to the ontological, epistemological, and axiological stance the investigator embraces for that particular endeavor (Fraenkel & Wallen, 2003).

The ontological underpinning of positivism is naïve realism, claiming there is one true reality that is understandable, identifiable, and measurable. The epistemology inherent in this paradigm encompasses dualism and objectivism. Dualism is premised on the assumption that the researcher, participant, and topic are independent of each other. Objectivism is attained by adhering to rigorous, standardized procedures that allow the

investigator to study the topic without bias. The axiological stance researchers strive for is the maintenance of neutrality, vis-à-vis the study participants, with both the investigator and the study subjects withholding their biases to diminish the chance of producing a flawed study. The final point achievable through a positivist design is the replication of findings in the enhancement of the theory verification process (Ponterotto, 2005).

Rhetoric, the language used to present the methodology and findings of research, is directly influenced by the epistemological axiological standpoint of the investigator. In the positivist philosophy, where the researcher strives to achieve an objective and emotionally detached role, rhetoric, in the form of words, is exacting and scientific, presented in a non-bias style (Clark, 1998).

In the positivist paradigm, a strict simulation of methodology and procedures is undertaken while carefully controlling or manipulating the variables under study. The researcher must maintain objective neutrality throughout the process to allow for the discovery and explanation of relationships among the variables. This position will allow for the formulation of new and universal laws that will be used to predict and control phenomena (Denzin & Lincoln, 1998). Positivists are dependent on true experimental procedures, and when this is unattainable, quasi-experimental methodology to achieve this goal. This philosophical imperative incorporates the empiricist's scientific viewpoint with the acquisition of universally accepted dictums constructed through verifiable results garnered from statistical analyses of the obtained data (Fraenkel & Wallen, 2003).

Purpose of the Research

The purpose of this research was to determine the extent to which, if any, a charter high school education has on the academic achievement of freshman students attending institutions of higher education, as measured by GPA, critical thinking, and self-efficacy.

Research Questions

Premised on the literature review, this study chose to investigate the following overarching research question:

Is there a difference between students who attended and graduated from charter high schools in Florida and students who attended and graduated from traditional high schools in Florida on their academic achievement, as measured by GPA, self-efficacy, and critical thinking skills during their freshman year at four-year public Florida universities?

The following are the questions which stem from the aforementioned research question:

1. Does a charter high school education have an impact on the *academic achievement* of freshman students at four-year public Florida universities, as measured by *GPA*?
2. Does a charter high school education have an impact on the *self-efficacy* of freshman students at four-year public Florida universities, as measured by *The General Perceived Self-Efficacy Scale*?
3. Does a charter high school education have an impact on the *critical thinking skills* of freshman students at four-year public Florida

universities, as measured by *The Watson and Glaser Critical Thinking Appraisal, Form S*?

Null Hypotheses

Premised upon the research question formulated above, the following null hypotheses was investigated in this study:

H_0^1 There is no difference between students who attended and graduated from charter high schools in Florida and students who attended and graduated from traditional high schools in Florida on their *academic achievement*, as measured by *GPA*, during their freshman year at four-year public Florida universities.

H_0^2 There is no difference between the *self-efficacy*, as measured by *The General Perceived Self-Efficacy Scale*, of freshman students at four-year public Florida universities who attended and graduated from a charter high school and freshman students at four-year public Florida universities who and graduated from a traditional high school.

H_0^3 There is no difference between the *critical thinking skills*, as measured by *The Watson and Glaser Critical Thinking Appraisal, Form S*, of freshman students at four-year public Florida universities who attended and graduated from a charter high school and freshman students at four-year public Florida universities who attended and graduated from a traditional high school.

Research Hypotheses

Premised upon the aforementioned null hypotheses, the following hypotheses were research (alternative) hypotheses for this study:

- H_1 : Freshman students at four-year public Florida universities who attended and graduated from a charter high school had attained a higher of *academic achievement*, as measured by *GPA*, than freshman students at four-year public Florida universities who attended and graduated from a traditional high school.
- H_2 : Freshman students at four-year public Florida universities who attended and graduated from a charter high school attained a higher score on *self-efficacy*, as measured by *The General Perceived Self-Efficacy Scale*, than freshman students at four-year public Florida universities who attended and graduated from a traditional high school.
- H_3 : Freshman students at four-year public Florida universities who attended and graduated from a charter high school attained a higher score on *critical thinking skills*, as measured by *The Watson and Glaser Critical Thinking Appraisal, Form S*, than freshman students at four-year public Florida universities who attended and graduated from a traditional high school.

Target Population and Sampling Procedures

The target population for this study consisted of freshman students at four-year public Florida universities who attended and graduated from Florida charter high schools or Florida traditional high schools ($N= 400$). The study sample was evenly divided between students who attended and graduated from Florida charter high schools and students who attended and graduated from traditional Florida high schools.

The sample was attained using the purposive sampling technique. This nonprobability sampling strategy aligns with the research design, requiring freshman

university students with specific criteria to be solicited as study participants (Fraenkel & Wallen, 2003).

There were two distinct sample populations participating in this study: (a) 200 students who attended and graduated from a South Florida charter high school and were currently freshman at four-year Florida public universities and (b) 200 students who attended and graduated from a South Florida traditional high school and were currently freshman at four-year Florida public universities.

In order to minimize the confounding variables inherent in studying the different student populations found in charter high schools and traditional high schools, the chosen schools were aligned premised on three criteria: 2004-2005 and 2005-2006 school performance grades, 2004-2005 and 2005-2006 Annual Yearly Progress status, and the 2004-2005 and 2005-2006 total points earned.

Once the Miami-Dade County Public Schools' Institutional Review Board requirements had been completed and satisfied, the researcher approached the gatekeepers in order for contact to be made with potential participants. Gatekeepers included the Regional Superintendent of Region Center IV and the Assistant Superintendent, Specialized Programs, Curriculum and Instruction. In order to fulfill Miami-Dade County Public Schools' privacy requirements, only the gatekeepers had access to the names and addresses of the study participants. The researcher provided a stamped envelope containing a cover letter explaining the purpose of the research project, the risks involved, the processes and instructions for completing the survey requirements, including a personal code for each study participant, and an assurance of confidentiality for each study participant. The gatekeepers noted the personal code next to each

participant's name. They then addressed and mailed the envelopes.

An additional recruitment procedure was utilized to procure the necessary number of study participants. Flyers were posted at Florida four-year public universities asking for volunteers to participate in the study. The criteria for participation were those who attended and graduated in May 2006 from specific Miami-Dade County charter high schools or Miami-Dade County traditional high schools. The specified schools were chosen on the three criteria stated above. Interested students were asked to call or email the researcher or to visit the secured website where a copy of the cover letter and instructions for completing the surveys were posted.

Revision of Recruitment Procedure

Premised on the challenges faced when trying to access study participants that met the research criterion, the researcher had to revise the methodology used to recruit study participants. The researcher filed a Barry University IRB Modification Form and was granted permission to garner participants using the following innovative method. The researcher emailed potential research participants through several websites found in the public domain, including Facebook.com and Myspace.com. After inputting the specific high schools the researcher had originally identified and specifying 2006 graduates, the researcher was able to access potential participants and invite them via email to complete the surveys found on the researcher's secure website. The pool of potential charter high school participants was expanded to include a charter high school in Broward County.

In addition, to facilitate the solicitation of study subjects who met the research criterion, the snowball method of sampling was employed (Patton, 2002). Individuals who participated in the research were asked to request that their former classmates access

the research website and complete the surveys found therein. Due to the difficulties described above, a smaller sampling was attained than originally stated.

Instrumentation

The General Perceived Self-Efficacy Scale

Generalized perceived self-efficacy is evaluated using a psychometric scale. This instrument was originally developed by Matthias Jerusalem and Ralf Schwarzer in 1981. Although it was originally authored in German, it is currently available in 27 languages. This tool was devised to evaluate the general adult population above the age of 12 (Schwarzer & Jerusalem, 1995).

The scale is multi-functional; designed to appraise a general sense of perceived self-efficacy; to predict levels of coping ability when confronted with the vicissitudes of daily life, as well as the capacity for adaptation as a result of stress generating life events. This 10 item instrument is self-administered, requiring approximately four minutes to complete. Responses are situated on a four-point scale, yielding a final composite score ranging from 10 to 40 (Schwarzer & Jerusalem, 1995).

The psychometric properties of *The General Perceived Self-Efficacy Scale* are very satisfactory, with the construct appearing to be universal; thus, corroborating its use for studies within countries. The high level of reliability of this instrument was established using samples from 23 nations; the Cronbach's alphas ranged from .76 to .90. Its stability has also been established through several longitudinal studies. Criterion related validity is well documented in numerous correlation studies (Schwarzer & Scholz, 2000).

The strengths of this instrument include its longevity of successful use spanning two decades. Its suitability as an indicator of quality of life issues at any reference point in time, as well as its adaptability to an expansive range of applications serves to identify the instrument as appropriate for the context of this study. However, one major weakness inherent in the scale is its inability to identify specific behavioral changes due to the general composition of its format. The addition of several content specific items that will aid in the elicitation of responses, germane to the research topic being addressed, may aid in ameliorating this flaw. Cross-cultural comparisons at the mean level have not been established, requiring further research to validate the construct adaptation (Schwarzer & Scholz, 2000).

The Watson-Glaser Critical Thinking Appraisal, Form S

Watson and Glaser operationalized critical thinking by dividing the construct into five cognitive spheres: inference, deduction, interpretation, assumption recognition, and argument evaluation. Premised on these constructs the researchers developed an instrument to measure these cognitive domains (Loo & Thorpe, 1999).

For this study, critical thinking skills were assessed using *The Watson-Glaser Critical Thinking Appraisal [WGCTA], Form S*. This evaluative tool developed, by Watson and Glaser in 1994, is an abbreviated version of the original instrument Form A (Stacks, Stephens, & Masten, 2005). The WGCTA Form A, published in 1942 consists of 80 test items and 16 scenarios taking one hour to navigate. This format has been used extensively over a long period of time and its norms validated. Form S was developed as an updated version of Form A, as well as to allow for a shortened assessment process. Questions selected for Form S were predicated on five pivotal objectives, including:

maintaining the five subset and scenario format of the original assessment, choosing items that had proven measures of validity and reliability, and augmenting the timeliness of the evaluation. This format contains 50% fewer test items and can be administered either untimed or in 30 minutes to individuals who have completed a minimum of a ninth grade education. Answer options range from two to five possibilities (Geisinger, 1998).

Ivens (1998) posited that an understanding of the Watson and Glaser's definition of critical thinking is imperative to successfully navigate this assessment tool. Five subtests consisting of a reading selection aligned with a series of exercises follow, consisting of both dispassionate and divisive themes. A composite score of all five subtests is obtained to determine the critical thinking skill level of the participant.

The norms for Form S are directly attributed to the norms of Form A. One strength of Form A is the capacious quantity of research studies undertaken using this instrument. Williams & Stockdale (2003) found the internal consistency and test-retest reliability to be within the .81 range, somewhat lower than the Form A configuration. The raw score standard error of measurement falls between 2.05 and 2.3 (Geisinger, 1998). Watson and Glaser (2006) reported that the Cronbach's alphas for Form S ranged from .76 to .85.

The Study Participants Demographic Information Form

This demographic information form was used to collect data from the research participants on the following variables: age, gender, ethnicity, and socio-economic status. These constituted extraneous factors in this study and may serve to further explain results in this study and or provide information for future research endeavors.

Design of the Study

This study consisted of a quasi-experimental, causal-comparative research design. The inability of the researcher to manipulate the independent variable justifies this study paradigm, since the theorized disparity between the students who attended and graduated from either charter high schools or traditional high schools already transpired (Salkind, 2003). This quantitative study used two instruments: *The General Perceived Self-Efficacy Scale* and *The Watson-Glaser Critical Thinking Appraisal, Form S*.

Procedures and Data Collection

Study participation was voluntary. A cover letter explaining the purpose of the research project, the risks involved, the process and instructions for completing the survey requirements, and an assurance of confidentiality was located on the first page of the researcher's secure website. The survey materials contained the following: (a) an Informed Consent Form, (b) a demographic survey, (c) a copy of *The General Perceived Self-Efficacy Scale*, and (d) a copy of *The Watson-Glaser Critical Thinking Appraisal, Form S* were available on a secured website (for example: SurveyMonkey.com) for online completion. If after accessing the researcher's secure website and reading the informed consent form the potential participant did not want to be part of the study he/she was not able to continue answering further questions. Each potential participant's cover letter contained a personal code which provided the researcher with an identifying mechanism to follow up with participants, through the gatekeepers, while maintaining their confidentiality.

Personal demographic information for this study was limited to age, gender, ethnicity, and socio-economic status. This data constituted extraneous factors in this

study and may serve to further explain results in this study and or provide information for future research endeavors. Therefore, the demographic data collected will remain confidential.

Each survey instrument was coded individually to maintain the confidentiality of each study participant. Data collected was entered into a statistical analysis program (SPSS 11.0) with an assigned code to continue to maintain the confidentiality of the study participants.

Participants in this study were not all anonymous; therefore, the researcher ensured that all data collected was held in confidence and all participants remained confidential to the extent permitted by law. If a web master was hired to create a website for data collection purposes, a third party confidentiality agreement form would have been completed by the individual(s) involved in the creation of the secured website for online form and survey completion.

All data collected was kept in a locked file in the researcher's house. Identification numbers and identifiers were kept in a separate locked file in the researcher's house. The researcher will secure the data in a locked file for a period of five years. At the conclusion of that time, all forms and data responses will be destroyed.

Data Analysis

The data analysis procedures are dependent upon the research being undertaken. Since this study examined the effect of one independent variable with two levels: a charter high school education and a traditional high school education on three dependent variables defined as academic achievement using the following constructs: GPA, self-efficacy, and critical thinking, a One-way Analysis of Variance [ANOVA] was used. The

justification for using this statistical analysis was premised on the directional nature of the research (alternative) hypotheses. The researcher used the accepted .05 alpha level of significance to test the null hypotheses. The researcher used statistical analyses software, SPSS 11.0 to run the statistical analyses on the data collected.

This chapter described in detail the methodology, the targeted population, and how the data was collected and statistically analyzed. The validity and reliability of the instruments were also delineated.

Chapter IV of this study will contain the findings gleaned following data collection. Chapter V will discuss the results of the findings and recommendations for future studies.

CHAPTER IV

RESULTS

Description of the Sample

A total of 66 students participated in the study. There were 34 traditional high school participants, with 14 completing all the study instruments and an additional 20 completing *The General Perceived Self-Efficacy Scale*, but not *The Watson-Glaser Critical Thinking Appraisal, Form S*. The number of charter high school participants was 32, with 13 completing all the study instruments and an additional 19 completing *The General Perceived Self-Efficacy Scale*, but not *The Watson-Glaser Critical Thinking Appraisal, Form S*.

The data for this study came from students who had attended and graduated from one specific Miami-Dade County traditional high school and students who had attended and graduated from one of two charter high schools. The location of one charter high school was in Miami-Dade County, Florida, and the other was located in Broward County, Florida.

Demographic Data

Traditional high school study participants. The demographic data from the traditional high school participants contained the following information. The age of the traditional high school participants ranged from 17 to 19, with 70.6% (n=24) being 18 years old (see Table 4.1).

Table 4.1

Age of Traditional High School Graduates

Age	Frequency	Percent
17	1	2.9
18	24	70.6
19	9	26.5

The number of female participants who had attended and graduated from a traditional high school was 79.4% (n=27), thus emphasizing the disproportionate number of female versus male participants from that genre of educational institution. This observation is supported when viewed from the perspective of the general population of the targeted traditional high school where the mean percentage of females was 54.15%. (see Table 4.2).

Table 4.2

Gender of Traditional High School Graduates

Gender	Frequency	Percent
Male	7	20.6
Female	27	79.4

The ethnic breakdown of the traditional high school participants aligned with certain characteristics of the most current data available for the student population of the high school from which the participants graduated. In 2004-2005, there were 31% White non-Hispanic students, 39% Hispanic students, 26% Black, and 4% Asian/Indian

Multiracial students in the eleventh grade. The study participants from this same high school were 29.4% (n=10) White non-Hispanic, 47.1% (n=16) Hispanic, 11.8% (n=4) Black, and 5.9% Multiracial as shown in Table 4.3.

Table 4.3

Ethnicity of Traditional High School Graduates

Ethnicity	Frequency	Percent
Caucasian, non-Hispanic	10	29.4
Hispanic	16	47.1
Black	4	11.8
Caribbean	2	5.9
Other	2	5.9

The socio-economic status of the students reflected by their parents' combined income showed 15.2% (n=5) earning less than \$25,000 with 48.5% (n=16) earning between \$25,100 and \$70,000, and 36.4% (n=12) earning more than \$70,100 (see Table 4.4). Premised on the information found in the targeted high school's School Improvement Plan (2005), in the 2005-2006 school year 21% of the student population were identified as economically disadvantaged, representing a somewhat higher percentage than the study participants.

Table 4.4

Parents' Combined Income for Traditional High School Graduates

Income	Frequency	Percent
Less than \$25,000	5	15.6
\$25,100-\$70,000	16	48.5
More than \$70,100	12	36.4

Charter high school study participants. Unlike the traditional high school participants who all attended and graduated from the same high school, those from the charter high school attended and graduated from two different charter high schools. Five study participants received their high school education in a charter high school in Miami-Dade County and the remaining 27 participants attended a charter high school in Broward County.

The demographic data collected from the charter high school participants included the following information. In reference to the question about their ages, responses ranged from 18 to 20 years old. Participants aged 19 were 50% (n=16) of the total and 46.9% (n=15) recorded their age as 18 (see Table 4.5).

Table 4.5

Age of Charter High School Participants

Age	Frequency	Percent
18	15	46.9
19	16	50.0
20	1	3.1

Assessing the male to female response rate of the charter high school participants revealed that 62.5% (n=20) of the total respondents were female and 37.5% (n=12) were male, representing a larger pool of female participants as shown in Table 4.6. The percentage of female participants is higher than that found in the general population of the charter high schools targeted, where the mean female population was 54.14%.

Table 4.6

Gender of Charter High School Participants

Gender	Frequency	Percent
Male	12	37.5
Female	20	62.5

The ethnic composition of the charter school participants showed a preponderance of Hispanic students; 43.8% (n=14) of the total. This figure aligns with the available data from the 2005-2006 school year where 88% of students at the Miami-Dade County charter high school were reported as Hispanic and 41.4% attendants of the Broward County charter high school identified themselves as Hispanic, equaling a combined total of 41.94%. The White non-Hispanic members were the second biggest pool of participants at 34.4% (n=11), aligning closely to the 33.4% of the population attributed to the Broward County charter high school whose participation accounted for 27 out of a total of 32 charter high school survey respondents (see Table 4.7).

Table 4.7

Ethnicity of Charter High School Participants

Ethnicity	Frequency	Percent
Caucasian, non-Hispanic	11	34.4
Hispanic	14	43.8
Black	1	3.1
Caribbean	5	15.6
Other	1	3.1

When analyzing the socio-economic status of the charter high school participants, 3.1% (n=1) placed their parents' combined income at less than \$25,000; 40.6% (n=13) reported it at between \$25,100 and \$70,000; while 56.3% (n=18) surveyed assessed their parents' combined earning at more than \$70,100. Free/reduced lunch data at the less represented Miami-Dade County charter high school was 48% for 2005-2006. Data from the Broward County charter high school for the same year reported 27% on free/reduced lunch; for a combined percentage of 30.28%. Thus revealing the sample population to be less representative of study participants whose parents occupy the lower echelons of the socio-economic strata (see Table 4.8).

Table 4.8

Parents' Combined Income for Charter High School Participants

Income	Frequency	Percent
Less than \$25,000	1	3.1
\$25,100-\$70,000	13	40.6
More than \$70,100	18	56.3

Comparison of traditional high school and charter school study participants. The demographics representing the charter high school participants differed on certain variables from the traditional high school participants. The mean age of 18.56 for the charter high school respondents was slightly older than the mean age of 18.38 for the traditional high school respondents. The majority of survey participants showed a preponderance of females from both populations, with 79.4% from the traditional high school and 62.5% from the charter high school. Yet, when comparing the percentage of female to male participants, 16.9% more charter high school males than males from the traditional high school had answered the survey.

The variable addressing ethnicity revealed differences between the two populations surveyed. The charter high school population had significantly more Caribbean students responding, 15.6%, and fewer students who identified themselves as Black, 3.1%, than the traditional high school. Yet, the majority of charter high school respondents were Hispanic, which aligned with the numbers attained from the traditional high school.

Assessing the responses to the question addressing the participants' parents' combined income variable, disparity was shown between the two study populations. The traditional high school graduates had a larger percentage of students from the lower socio-economic level, 15.6% than graduates from the charter high school, 3.1%. Nearly half, 48.5% of the traditional high school participants reported income in the middle tier, while the largest percentage, 56.3% of charter school participants reported their parents' income at the highest level of more than \$70,100.

Distribution of Scores of the Dependent Variables

Means and Standard Deviations

Grade point average. The research participants reported their grade point average [GPA] after their first semester at a four-year public Florida university. When evaluating the results from both the traditional high school participants and those from the charter high school, the scores reported ranged from a 2.00 to a 4.00 with a mean of 3.2418 and the standard distribution calculated at .54252.

Disaggregating the data by the genre of high school the participant attended and graduated from revealed a higher GPA for students from the traditional high school than their counterparts from the charter high school. The range of scores reported by that population was 2.5 to 4.0. The mean score for GPA of traditional high school students was 3.3897 with a standard distribution of .47679, while the charter high school students attained a mean GPA of 3.0840 with a standard distribution of .57114 (see Figure 4.1).

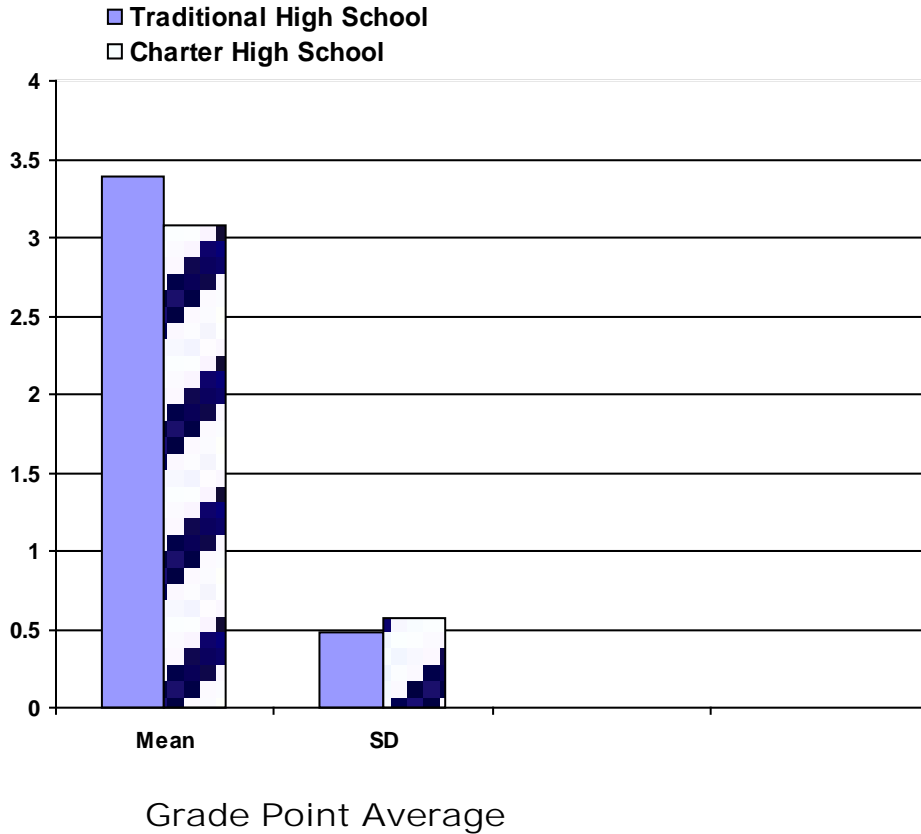


Figure 4.1. Means and standard deviations of GPA for the study sample.

Self-efficacy. The range of scores attainable on *The General Perceived Self-Efficacy Scale* is 10 to 40, with 40 representing the highest level of self-efficacy on this instrument. Assessing the data from the traditional high school participants revealed a range of scores from 27 to 39 with a mean score of 33.47 and a standard deviation of 3.670. This result was closely aligned with the scores attained by the charter high school participants who recorded the identical range of scores as their traditional high school counterparts. Yet, the mean score of the charter high school population was slightly higher at 33.94 with a standard deviation of 3.336 (see Figure 4.2)

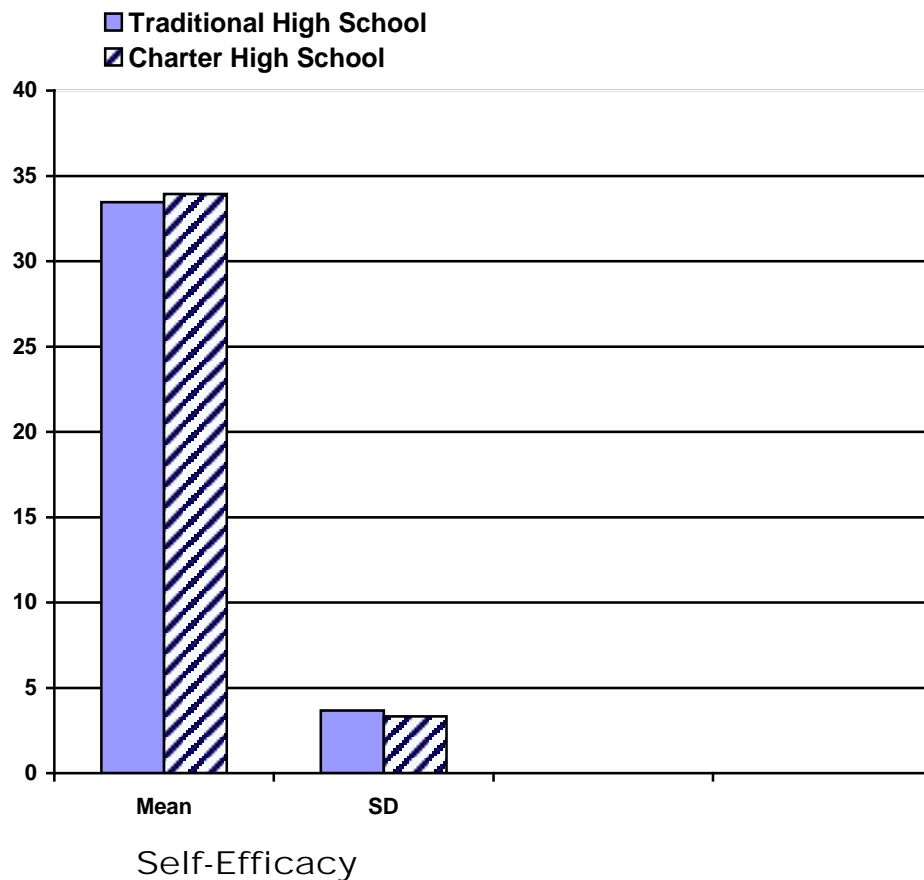


Figure 4.2. Means and standard deviations of the scores on *The General Perceived Self-Efficacy Scale* for the study sample.

Critical thinking. The Watson-Glaser Critical Thinking Appraisal, Form S composed of forty multiple choice questions, has a theoretical range of scores from zero to 40, with one point being allotted per correct answer. The traditional high school participants' results were spread widely across the spectrum, from 16 to 36. The mean score for this population was 25.93 with a standard deviation of 6.145. The respondents from the charter school population reported similar scores ranging from 13 to 32. The mean of their results was 22.92 with a standard deviation of 6.235. The large standard

deviation for both populations is attributable to the broad spread of values from the mean in this data set (see Figure 4.3).

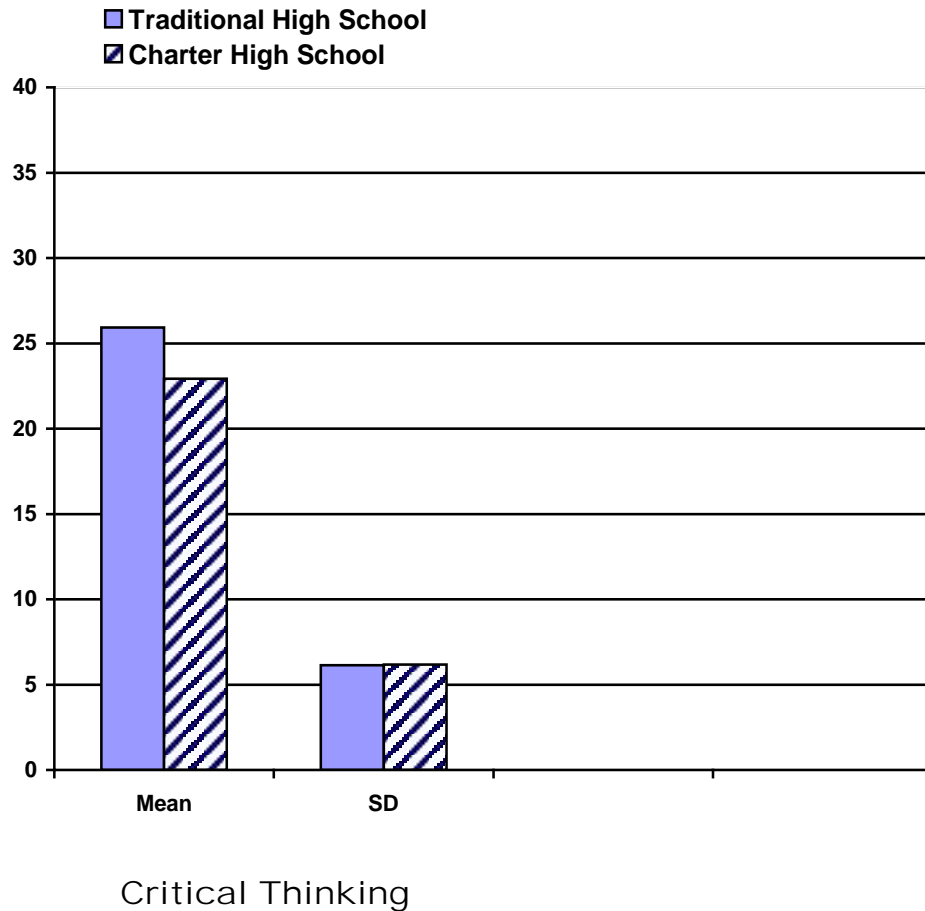


Figure 4.3. Means and standard deviations of the scores on *The Watson-Glaser Critical Thinking Appraisal, Form S* for the study sample.

Analysis of Variance

The statistical analysis used to determine the effect of a charter high school education on academic achievement of university freshman was a One-way Analysis of Variance [ANOVA]. The justification in choosing this analysis was its ability to

determine the effects of one independent variables with two levels – a traditional high school education and a charter high school education on three dependent variables – GPA, self-efficacy, and critical thinking.

Grade point average. The grade point average [GPA] attained by both study populations after their first semester at a four-year Florida public university was recorded. The data was subjected to a one-way ANOVA which showed significance at $F=5.259 (1,60), p=.025$. Conclusions drawn from this analysis indicated that the GPA for the students who had attended and graduated from a traditional high school was significantly higher at $p=.025$ than the students who had attended and graduated from a charter high school.

Null hypothesis 1: There is no difference between students who attended and graduated from charter high schools in Florida and students who attended and graduated from traditional high schools in Florida on their *academic achievement*, as measured by *GPA*, during their freshman year at four-year public Florida universities.

Thus the researcher was able to reject this null hypothesis since the ANOVA showed a significant difference between the GPA scores of participants who attended and graduated from a traditional high school and participants who attended and graduated from a charter high school at $F=5.259; p=.025$ (see Table 4.9).

Table 4.9

ANOVA for Grade Point Average

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.447	1	1.447	5.259	.025
Within Groups	16.507	60	.275		

Total	17.954	61
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Self-efficacy. The scores on *The General Perceived Self-Efficacy Scale* of study participants from the traditional high school and charter high school settings were analyzed using an ANOVA. The results were not significant $F=.284 (1,63)$, $p=.586$.

Null hypothesis 2: There is no difference between the *self-efficacy*, as measured by *The General Perceived Self-Efficacy Scale*, of freshman students at four-year public Florida universities who attended and graduated from a charter high school and freshman students at four-year public Florida universities who attended and graduated from a traditional high school.

The researcher failed to reject this null hypothesis since the scores recorded were not significant $F=.284$ at $p=.586$ (see Table 4.10).

Table 4.10

ANOVA for Self-Efficacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.505	1	3.505	.284	.596
Within Groups	778.342	63	12.355		
Total	781.846	64			

Critical Thinking. Study participants' scores on *The Watson-Glaser Critical Thinking Appraisal, Form S* were assessed using an ANOVA. The results showed there was no significant difference between the critical thinking skills of students who attained their high school education at a traditional high school and the students who had received their high school education at a charter high school $F=.1603 (1,25)$, $p=.217$.

Null hypothesis 3: There is no difference between the *critical thinking skills*, as measured by *The Watson and Glaser Critical Thinking Appraisal, Form S*, of freshman students at four-year public Florida universities who attended and graduated from a charter high school and freshman students at four-year public Florida universities who attended and graduated from a traditional high school.

Premised on the analysis of the study participants' scores on *The Watson-Glaser Critical Thinking Appraisal, Form S*, the researcher did not reject this null hypothesis. No significant difference in levels of self-efficacy was found between the two study populations, $F=.1603$ at $p=.217$ (see Table 4.11).

Table 4.11

ANOVA for Critical Thinking

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	60.889	1	60.889	1.603	.217
Within Groups	949.852	25	37.994		
Total	1010.741	26			

CHAPTER V

DISCUSSION

Introduction

This chapter commences with a concise review of the purpose and design of the research study undertaken. A discussion concerning the study's results and its veracity vis-à-vis the hypotheses posited will be articulated herein. Limitations inherent in this study and possible areas for future research will also be addressed. The organization of this summary will address the effect of a charter high school education on the academic achievement of freshman university students. An association between the type of high school attended and scores attained on GPA, *The General Perceived Self-Efficacy Scale*, and *The Watson-Glaser Critical Thinking Appraisal* [WGCTA], *Form S* following the first semester of attendance at a four-year institution of higher education will be explored. Implications for the different genre of high school educational environments in relation to the results attained will be addressed.

The purpose of this study was to investigate the impact of a charter high school education on the academic achievement of freshman students attending four-year public universities in Florida. Charter schools, being a fairly recent addition to the traditional public school model, continue to evoke both praise and denigration from individuals involved in educational pursuits (Allen, & Devlin, 2002). In addition, the challenges of interpreting data accrued from charter schools in order to attest to its efficacy or as support for its eradication is endemic in some of the seminal research studies to date (Hoxby, 2004; Roy & Mishel, 2005).

The present study has attempted to fill a gap in the research. Although studies addressing this genre of educational experience have been conducted, to date no study has addressed the efficacy of a charter high school education on students' ability to successfully traverse a higher education environment. The data collected from 66 study participants sought to determine whether the independent variable, the genre of high school education attained, had an impact on any of the dependent variables – GPA, self-efficacy, and critical thinking ability of freshman students enrolled in four-year Florida public universities. Responses obtained by surveying students who had attended and graduated from either a traditional high school or a charter high school in South Florida and who were presently freshman students enrolled in a four-year Florida public university provided answers to the following research question:

Is there a difference between students who attended and graduated from charter high schools in Florida and students who attended and graduated from traditional high schools in Florida on their academic achievement, as measured by GPA, self-efficacy, and critical thinking skills during their freshman year at four-year public Florida universities?

Data for this research was collected using a purposive sampling of students who had attended and graduated from a traditional high school and those who had attended and graduated from a charter high school. Participants completed surveys found on the researcher's secured website. The classification of students who participated in the study was as follows: 34 students who had attended and graduated from a traditional high school in South Florida and 32 students who had attended and graduated from a charter high school in South Florida. The three dependent variables were assessed in the

following manner: self-reporting of GPA following participants first semester at a four-year public Florida university, completion of *The General Perceived Self-Efficacy Scale*, and completion of the WGCTA, Form S.

The General Perceived Self-Efficacy Scale, a ten-item survey, was developed by Jerusalem and Schwarzer. The instrument is scored on a four-point Likert Scale, producing a composite score with a distribution between 10 and 40. *The General Perceived Self-Efficacy Scale* demonstrates high reliability as evidenced by its Cronbach's alphas which range from .76 to .90 (Schwarzer & Scholtz, 2000). The development of this instrument was premised on the seminal work of Bandura (1997) where he described self-efficacy as a belief in one's ability to successfully accomplish a specific task. Efficacious individuals are self-demanding, unwilling to rely on the abilities of others. The proliferate capacity of this construct is not dependent upon an individual's aptitude; instead, it is dependent upon an individual's orchestration of his/her abilities.

The WGCTA, Form S is an abridged form of the original instrument developed by Watson and Glaser in 1942 to measure critical thinking skills. Form S consists of 40 test items contained within five subsets: inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments. This short form maintains the scenario format of the original instrument (Geisinger, 1998). A composite score of the five subsets is procured to assess the critical thinking level of the respondent (Ivers, 1998). The reliability of this instrument, Form S, was reported by Watson and Glaser (2006) as having Cronbach's alphas ranging from .76 to .85.

Summary of Results

This research provides an opportunity to evaluate the readiness of charter high school graduates to traverse the higher education terrain. The potentiality for academic success when a student achieves self-efficacy in curricular areas and procures critical thinking skills is substantiated by extant research. A correlation between self-efficacy and academic achievement has been noted in several studies, concluding that higher levels of self-efficacy produce correspondingly improved academic achievement in the domains investigated (Hackett, Betz, Casa, & Roche-Singh, 1994; Pajares & Johnson, 2005; Pajares & Kranzler, 1995). When evaluating critical thinking skills and academic achievement, several studies found a correlation between these two constructs with higher critical thinking skills aligning with higher levels of academic achievement (Collins & Onwuegbuzie, 2000; Rucks, 2002; Smith, 1995).

Grade Point Average

The findings from this study, analyzed using a One-way ANOVA, indicated that there was a significant difference between the grade point average [GPA] of students who attended and graduated from a traditional high school and those who attended and graduated from a charter high school. Students from the traditional high school setting attained significantly higher GPA after their first semester at a four-year Florida public university than their charter high school counterparts.

These results were contraindicative of the research conclusions attained by Hoxby (2004) who found that when controlling for socio-economic status, environmental, parental, and student variables, charter elementary school students attained higher scores in mathematics and reading than those attending the nearest traditional public elementary

school. In contrast, the findings from this study aligned with those of Bowman (2000) who found that traditional public school students in Michigan outperformed charter school students in the core curricular areas of mathematics, reading, writing, and science. Harmon, Bingham, and Hood (as cited in Heaggans, 2006) concurred with Bowman's results, concluding that when controlling for ethnicity, charter school students in North Carolina trailed those from traditional public schools on standardized test scores.

Self-Efficacy

The data compiled for the construct of self-efficacy was attained using a One-way ANOVA to test for significance. The researcher concluded that there was no significant difference between the self-efficacy scores of traditional high school students and charter high school students as measured by *The General Perceived Self-Efficacy Scale*.

Although no research has investigated self-efficacy within a charter school environment, several studies have addressed self-efficacy and academic achievement. Hackett, Betz, Casa, and Roche-Singh (1994) found that self-efficacy had a positive impact on academic achievement in post-secondary engineering students. Pajares and Johnson (1996) investigated self-efficacy within the construct of writing. While controlling for writing aptitude and gender, the researchers found a correlation between writing scores and reported levels of self-efficacy. Another study reprised these findings when evaluating mathematical ability and self-efficacy (Pajares & Kranzler, 1995).

Critical Thinking

Critical thinking skills in a higher education environment was assessed. The data garnered from the WGCTA, Form S were evaluated using a One-way ANOVA. The analysis yielded no significant difference in the critical thinking skills between students

who had attended and graduated from a traditional high school and students who had attended and graduated from a charter high school. Yet, prior studies have indicated a correlation between critical thinking and academic achievement. Rucks (2002) found a positive correlation between these two variables when evaluating freshman students at university. Smith (1995) obtained results on a similar population that validated Rucks' research. Smith found that students' scores on the WGCTA, Form S aligned with their GPA, with a high critical thinking score producing a higher GPA.

Research on the academic achievement of charter school students versus traditional public school students has been fraught with controversy. A 2006 report by the Charter School Achievement Consensus Panel posited that there was no single research methodology that consistently yielded generalizable findings between charter schools. Heaggans (2006) concluded that the student body in this genre of educational institution is often composed of at-risk minorities. Thus, the ability to compare the outcomes of a charter school education with that of a traditional public school is particularly difficult. Manno (as cited in Lin, 2001) acceded that the requirement to prove accountability through the administration of standardized tests that then drive the curriculum, impinged on the foundational underpinnings of a charter school experience, thus limiting the effectiveness of this genre of educational establishment.

Implication for Charter Schools

Although the findings from this study did not support the efficacy of a charter school education when addressing academic achievement as defined by GPA, self-efficacy, and critical thinking; this genre of educational experience is still in its infancy when compared to the traditional public school environment. Time must be allotted

before condemning this educational experiment as incapable of successfully educating the nation's youths. In 1991, Minnesota passed legislation that allowed for the formation of the first charter school in the United States (Finn, Manno, & Vanourek, 2000). This contrasts with the establishment of traditional public schools in North America formed under the auspices of the pilgrims in Colonial America during the 1700s (Fraser, 2001).

In addition, the original justification as cited by Lazaridou & Fris (2005) for establishing charter schools included creating a free-market enterprise, unshackled from the centralized, bureaucratic model of traditional public school management, while providing all stakeholders input into the educational process. The aforementioned foundational philosophy is juxtaposed with the reality of increased governmental involvement and demands for accountability in educational endeavors that is a direct causation of high stakes testing. This results in standardized testing driving instruction and the negation of the nexus upon which charter schools were created. Thus to prematurely campaign for the demise of this genre of educational experience would be disadvantageous.

Limitations

The researcher found several limitations germane to this study. The small number of students who participated in this investigation (n=66) could have led to a Type I error. Fraenkel and Wallen (2003) recommended using a minimum sample size of 30 study participants per group to allow for generalizability in a causal-comparative study. The difficulty in procuring study participants was exasperated by the lack of cooperation by several gatekeepers, resulting in a revision of the data collection method.

The study population, freshman students at four-year public Florida universities, had a low response rate to an invitation to participate in the research. In terms of the traditional high school population, 277 students were contacted by the gatekeeper via email and invited to participate in the study. A subsequent email was sent and the original invitation reiterated. Of the 277 potential participants, 34 answered the call resulting in a 12.27% response rate; from the 34 participants 14 provided all the requested information, specifically completing the WGCTA, Form S, thus lowering the response rate for totally completed surveys to 5.05%.

The correspondence with the charter school population was also via email, with the researcher soliciting participation from a total of 168 targeted students. Thirty-two respondents supplied all the requested information except those of the WGCTA, Form S; culminating in a response rate of 19.05%. A total of 12 participants completed all the solicited information, resulting in a response rate of 7.14%.

In addition, the demographics of the study participants did not consistently align with those of the high schools from which they graduated, placing in question the conclusions extrapolated from the data collected. The female response rate of both study populations was significantly higher than that of their male counterparts. Seventy-nine percent (79.4%) of traditional high school respondents were female contrasting to a nearly even division of gender at the targeted traditional high school, with 51% of the student population being female. The same phenomenon was observed in the study participants from the charter high school population; 62.5% were female, somewhat higher than the mean female population of 54.14% at the two charter high schools targeted.

Addressing the issue of the ethnic composition of the high schools targeted by this study, a large Hispanic population was mirrored by the study participants. Yet, the Black high school graduates of both study populations were under-represented at a mean of 10.4% when compared to the total school populations from which they were culled. The traditional high school reported the Black student population at 26% and the mean percentage of Black students at the charter high schools the participant attended was 17.2%.

Socio-economic status of the students predicated on the income of their parents revealed a large discrepancy in the charter school participants with 3.1% reporting their parents' income at less than \$25,000. This contrasts with the mean percentage of low income students reported as 21% at the two charter schools from which participants were garnered. Thus, the fact that the demographics did not always align with the school population from which they were attained may impact the veracity of the study.

Additional limitations of this study include the fact that study participants were asked to self-report, thus requiring an assumption that they responded to all requests for information truthfully. The inability to attain a true random sampling of the study participants due to its causal-comparative design may impact on the generalizability of the research conclusions. The use of charter schools from two different counties, Miami-Dade and Broward, while using only one Miami-Dade County traditional high school may have impacted on the conclusions obtained.

The generalizability of research results to other charter schools may be questionable, premised on the broad range of curricular objectives and populations found within this genre of educational institutions. Another limiting component to the external

validity of this study is the fact that this research was conducted in a unique environment; only students who had attended and graduated from a South Florida traditional high school or charter high school and were attending a four-year public university in Florida were included in this study. Thus the ability to apply the results to different charter high schools may be questionable.

Recommendations for Further Research

This research explored the impact of a charter high school education on the academic achievement of freshman students at four-year public Florida universities. Creating a more robust study that allows for a more representative sample would require expanding the data collection nationwide to assess the impact of a charter high school education in all regions of the United States. Evaluating the data within regions and across regions may guard against regional and cultural differences inherent in the different populations found in this country.

In addition, the demographic data collected could be extrapolated to evaluate the impact of a charter high school education, vis-à-vis age, gender, ethnicity, and socioeconomic status. Controlling for the number of years each student attended a charter high school by including a question pertaining to this in the demographic portion of the survey would be advantageous. Disaggregating the data with reference to the genre of charter high school attended, such as a college preparatory focus, its management configuration, and authorizing authority may add to the knowledge of the efficacy of the educational process within the myriad forms of charter schools currently operating.

Future research might include recording the study participants' high school GPAs as an additional means of controlling for extraneous variables. Administering the two

instruments, *The General Perceived Self-Efficacy Scale* and *The Watson-Glaser Critical Thinking Appraisal, Form ,S* during the last grading period of students' senior year at their charter high schools, prior to their exposure to a higher education environment, may be a more valid assessment of these variables.

Incorporating a qualitative research design, with its holistic approach and fundamental understanding that truths are individually constructed, premised on one's lived experiences, would avail the investigator greater latitude within which to conduct this research study. The naturalistic methodology employed may allow for the exploration of this social phenomenon, a charter high school educational experience, vis-à-vis the meanings participants affix to them.

Conclusions

The study conducted was a first attempt to fill a gap in the research on charter schools; specifically, investigating the impact of a charter high school education on the academic achievement of freshman students at four-year public Florida universities. Data in this causal-comparative study was attained using the purposive sampling methodology culminating in 66 total participants. Difficulty in accessing the population required for this research contributed to the low response rates of both populations.

Disaggregating the data showed that females responded at a higher rate, 79.4% of the traditional high school students and 62.5% of those who attended and graduated from the charter high schools, than the school populations from which the participants were culled. The mean percentage of Black respondents at 10.4% was found to be lower than the target traditional and charter high school populations. Study participants who occupy the lower strata of the socio-economic ladder were also underrepresented in this study,

when comparing the responses attained with the statistics available from their respective schools.

The results from the research conducted showed that the participants who attended and graduated from a traditional high school had a significantly higher GPA than those who attended and graduated from a charter high school, at $F=5.259$; $p=.025$. Yet, when evaluating academic achievement in terms of self-efficacy using *The General Perceived Self-Efficacy Scale*, no significant difference was found between the two populations, at $F=.284$; $p=.586$. Similar outcomes were found when assessing academic achievement using critical thinking as the construct. When analyzing participants' scores on *The Watson-Glaser Critical Thinking Appraisal, Form S* no significant difference was found between students who attended and graduated from a traditional high school and their counterparts from a charter high school, at $F=.1603$; $p=.217$.

Premised on the aforementioned limitations, although the data may lead one to conclude that traditional high school graduates have been somewhat better prepared to traverse the higher educational terrain, additional research is needed to substantiate this sequitur. Broadening the respondent base by including a national sampling of charter high schools would allow for a more robust study. Controlling for the myriad of variables inherent in this form of educational experience would enhance the conclusions reached from the data analyzed.

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APPENDIX A
GENERAL PERCEIVED SELF-EFFICACY SCALE

GENERAL PERCEIVED SELF-EFFICACY SCALE

	A	B	C	D
(1) I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
(2) If someone opposes me, I can find means and ways to get what I want.	1	2	3	4
(3) It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
(4) I am confident that I could deal efficiently with unexpected events.	1	2	3	4
(5) Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
(6) I can solve most problems if I invest the necessary effort.	1	2	3	4
(7) I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
(8) When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
(9) If I am in trouble, I can usually think of something to do.	1	2	3	4
(10) No matter what comes my way, I am usually able to handle it.	1	2	3	4

Legend for Chart:

- A** - Not at all true
- B** - Hardly true
- C** - Moderately true
- D** - Exactly true

(Jerusalem & Schwarzer, 1981)

APPENDIX B

WATSON-GLASER CRITICAL THINKING APPRAISAL, FORM S

WATSON-GLASER CRITICAL THINKING APPRAISAL, FORM S

The Watson-Glaser Critical Thinking Appraisal, Form S is copyrighted and may not be reproduced. Information regarding the instrument is obtainable from the following website:

[http://harcourtassessment.com/haiweb/Cultures/en-US/dotCom/Assessment+Center/SubPages/Watson-Glaser+Critical+Thinking+Appraisal+\(WGCTA\)+Form+S.htm](http://harcourtassessment.com/haiweb/Cultures/en-US/dotCom/Assessment+Center/SubPages/Watson-Glaser+Critical+Thinking+Appraisal+(WGCTA)+Form+S.htm)

Individuals may purchase the instrument from Harcourt Assessment, Inc., 19500 Bulverde Road, San Antonio, Texas 78259.

APPENDIX C
DEMOGRAPHIC INFORMATION FORM

DEMOGRAPHIC INFORMATION FORM

1. I attended and graduated from the following high school:

- Traditional high school #1
- Charter high school #2
- Charter high school #3
- Other (please specify) _____

2. Age

- 18
- 19
- 20
- 21
- Other (please specify) _____

3. Gender

- Male
- Female

4. Ethnicity

- Caucasian, non-Hispanic
- Hispanic
- Black
- Caribbean
- Other (please specify) _____

5. Parents' combined income

- Less than \$25,000
- \$25,100 to \$70,000
- More than \$70,000

APPENDIX D

HUMAN PARTICIPANT PROTECTION EDUCATION
for RESEARCH TEAMS COMPLETION CERTIFICATE



[NCI Home](#) | [Cancer Topics](#) | [Clinical Trials](#) | [Cancer Statistics](#) | [Research & Funding](#) | [News](#)



Human Participant Protections Education for Research Teams

Completion Certificate

This is to certify that

priva fischweicher

has completed the **Human Participants Protection Education for Research Teams** online course, sponsored by the National Institutes of Health (NIH), on 06/25/2006.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.

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APPENDIX E
BARRY UNIVERSITY
RESEARCH with HUMAN PARTICIPANTS
PROTOCOL FORM

Barry University
Research with Human Participants
Protocol Form

PROJECT INFORMATION

1. Title of Project

Investigating the Impact of Charter High Schools and Traditional Public High Schools on the Academic Achievement of First Semester Students at Four-Year Public Universities in Florida

2. Principal Investigator

Priva Fischweicher
Barry University, Adrian Dominican School of Education
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305 770-0294 Privaf770@aol.com

3. Faculty Sponsor

Dr. Carmen McCrink, Associate Professor
Educational Leadership/Higher Education
Adrian Dominican School of Education
Barry University
11300 NE 2nd Avenue
Miami Shores, FL 33161
305 899-3702 cmccrink@mail.barry.edu

Faculty Sponsor Signature: _____ Date: _____

4. Dean/Administrator of school targeted for research (If Applicable)

(Name, title, school, department, mailing address, telephone number, email address)

Approval Signature: _____ Date: _____

5. Funding Agency or Research Sponsor

N/A

6. Proposed Project Dates

Start December, 2006

End December, 2007

Note: It is appropriate to begin your research project (i.e., the data collection process) only *after* you have been granted approval by this board. Proposals that list starting dates occurring before the date of submission will be returned without review.

Please Provide the Information Requested Below

A. Project activity STATUS is: (Check one of the following three as appropriate.)

NEW PROJECT

PERIODIC REVIEW ON CONTINUING PROJECT

PROCEDURAL REVISION TO PREVIOUSLY APPROVED PROJECT

(Please indicate in the **PROTOCOL** section the way in which the project has been revised.)

B. This project involves the use of an **INVESTIGATIONAL NEW DRUG (IND) OR AN APPROVED DRUG FOR AN UNAPPROVED USE** in or on human participants.

YES NO

Drug name, IND number and company:

C. This project involves the use of an **INVESTIGATIONAL MEDICAL DEVICE (IMD)** or an **APPROVED MEDICAL DEVICE FOR AN UNAPPROVED USE.**

YES NO

D. This project involves the use of **RADIATION** or **RADIOISOTOPES** in or on human participants.

YES NO

E. This project involves the use of Barry University students as participants. (If any students are minors, please indicate this as well.)

YES Barry Students will be participants (Will minors be included? YES NO)

NO Barry Students will participate

F. **HUMAN PARTICIPANTS** from the following population(s) would be involved in this study:

Minors (under age 18)

Fetuses

Abortuses

Pregnant Women

Prisoners

Mentally Retarded

Mentally Disabled

Other institutionalized persons (specify)

Other (specify) Freshman university students who had attended and graduated from a charter high school or a traditional high school

G. Total Number of Participants to be Studied: maximum 400

Description of Project

1. **Abstract** (200 words or less)

Charter schools are a recent educational phenomenon, evolving from federal legislation that mandated increased levels of academic achievement for all students enrolled in the public school system. Allowing a free-market structure, liberated from a centralized bureaucratic management model, while availing all stakeholders a voice in the educational process, was the philosophical underpinning upon which the charter school movement was premised.

Certainly, academic achievement is the imperative behind the proliferation of charter schools across the nation and in Florida. Yet, there are myriad components that impact on a student's ability to succeed in an educational institution.

This study seeks to determine the effect, if any, of a charter high school education on the academic achievement of freshman students attending Florida public four-year universities. Three variables will be analyzed to evaluate academic achievement: GPA, critical thinking, and self-efficacy.

Academic achievement will be studied and measured using self-reported GPA after the first semester at university, the Watson-Glaser Critical Thinking Appraisal, Form S and the General Perceived Self-Efficacy Scale. Participants in this study will include 200 students who graduated in May 2006 from a South Florida charter high school and 200 students who graduated in May 2006 from a South Florida traditional high school.

2. Recruitment Procedures

There will be two distinct sample populations participating in this study: (a) 200 students who attended and graduated from a South Florida charter high school and are currently freshman at four-year Florida public universities and (b) 200 students who attended and graduated from a South Florida traditional high school and are currently freshman at four-year Florida public universities.

Once the Miami-Dade County Public Schools' Institutional Review Board requirements have been completed and satisfied, the researcher will approach the gatekeepers in order for contact to be made with potential participants. Gatekeepers will include the Regional Superintendent of Region Center IV and of the Assistant Superintendent, Specialized Programs, Curriculum and Instruction. In order to fulfill Miami-Dade County Public Schools' privacy requirements, only the gatekeepers will have access to the names and addresses of the study participants. The researcher will provide a stamped envelope containing a cover letter explaining the purpose of the research project, the risks involved, the processes and instructions for completing the survey requirements, including a personal code for each study participant and an assurance of anonymity for each study participant. The gatekeepers will note the personal code next to each participant's name. They will then address and mail the envelopes.

In order to minimize the confounding variables inherent in studying the different student populations found in charter high schools and traditional high schools, the chosen schools will be aligned premised on three criteria: 2004-2005 and 2005-2006 school performance

grades, 2004-2005 and 2005-2006 Annual Yearly Progress status, and the 2004-2005 and 2005-2006 total points earned.

Study participation will be voluntary. A cover letter explaining the purpose of the research project, the risks involved, the process and instructions for completing the survey requirements, and an assurance of anonymity will be mailed to potential participants. The survey materials containing the following: (a) a demographic survey, (b) self-report GPA earned at the end of the participant's first semester at university (c) a copy of the General Perceived Self-Efficacy Scale, and (d) a copy of the Watson-Glaser Critical Thinking Appraisal, Form S will be available on a secured website <http://anoncomm.com> for online completion. Each potential participant's cover letter will contain a personal code which will provide the researcher with an identifying mechanism to follow up with participants, through the gatekeepers, while maintaining their anonymity.

An additional recruitment procedure maybe utilized to procure the necessary number of study participants. Flyers will be posted at Florida four-year public universities asking for volunteers to participate in the study. The criteria for participation will be those who attended and graduated in May 2006 from specific Miami-Dade County charter high schools or Miami-Dade County traditional high schools. The specified schools will be chosen on the three criteria stated above. Interested students will be asked to call or email the researcher or to visit the secured website where a copy of the cover letter and instructions for completing the surveys will be posted.

A raffle will be held for a \$500 gift certificate to Amazon.com. Each participant that completes the required survey materials will be entered into the raffle using his/her personal code. If the participant completes the survey materials within two weeks of the beginning of the data collection process, he/she will be entered into the raffle two times. All other participants completing the survey materials prior to data analysis will be entered into the raffle one time. The raffle will be drawn by a neutral party and the randomly chosen winner will be notified through the gatekeeper.

3. Methods

Each study participant will be requested to complete the demographic survey, self-report GPA earned at the end of his/her first semester at university, complete the General Perceived Self-Efficacy Scale, and the Watson-Glaser Critical Thinking Appraisal, Form S. The completion of the aforementioned form and instruments should not exceed 60 minutes. The participants will be requested to complete all requested information within one week of receipt. The researcher will record the return of all completed documentation in a database by date and the identification code assigned to each participant.

All data collected will be kept in a locked file in the researcher's house. Identification numbers and identifiers will be kept in a separate locked file in the researcher's house.

The researcher will secure the data in a locked file for a period of five years. At the conclusion of that time, all forms and data responses will be destroyed.

Instrumentation

The General Perceived Self-Efficacy Scale is multi-functional; designed to appraise a general sense of perceived self-efficacy; to predict levels of coping ability when confronted with the vicissitudes of daily life, as well as the capacity for adaptation as a result of stress generating life events. This 10 item instrument is self-administered, requiring approximately four minutes to complete. Responses are situated on a four-point scale, yielding a final composite score ranging from 10 to 40 (Schwarzer and Jerusalem, 1995). The psychometric properties of the General Perceived Self-Efficacy Scale are very satisfactory, with the construct appearing to be universal; thus, corroborating its use for studies within countries. The high level of reliability of this instrument was established using samples from 23 nations; the Cronbach's alphas ranged from .76 to .90. Its stability has also been established through several longitudinal studies. Criterion related validity is well documented in numerous correlation studies (Schwarzer and Scholz, 2000).

For this study, critical thinking skills will be assessed using the Watson-Glaser Critical Thinking Appraisal [WGCTA], Form S. This evaluative tool, developed by Watson and Glaser in 1994, is an abbreviated version of the original instrument Form A (Stacks, Stephens, and Masten, 2005). The WGCTA Form A, published in 1942, consists of 80 test items and 16 scenarios taking one hour to navigate. This format has been used extensively over a long period of time and its norms validated. Form S was developed as an updated version of Form A, as well as to allow for a shortened assessment process. Questions selected for Form S were predicated on five pivotal objectives, including: maintaining the five subset and scenario format of the original assessment, choosing items that had proven measures of validity and reliability, and augmenting the timeliness of the evaluation. This format contains 50% fewer test items and can be administered either untimed or in 30 minutes to individuals who have completed a minimum of a ninth grade education. Answer options range from two to five possibilities. The norms for Form S are directly attributed to the norms of Form A. One strength of Form A is the capacious quantity of research studies undertaken using this instrument. Williams and Stockdale (2003) found the internal consistency and test-retest reliability to be within the .81 range, somewhat lower than the Form A configuration. The raw score standard error of measurement falls between 2.05 and 2.3 (Geisinger, 1998).

The Study Participants Demographic Information Form will be used to collect data from the research participants on the following variables: age, gender, ethnicity, and socio-economic status. These will constitute extraneous factors in this study and may serve to further explain results toward future research endeavors.

The data analysis procedures are dependent upon the research being undertaken. Since this study will be examining the effect of one independent variable with two levels: a charter high school education and a traditional high school education on three dependent variables: GPA, self-efficacy, and critical thinking, a multivariate analysis of variance [MANOVA] will be used. Additionally, the one tailed t-test will be used to test for differences within the same group. The justification for using this statistical analysis is premised on the directional nature of the research (alternative) hypotheses. The researcher will use the accepted .05 alpha level of significance to test the null hypotheses. The researcher will use statistical analyses software, SPSS 11.0 to run the statistical analyses on the data collected.

4. Alternative Procedures

The alternative procedure is to not participate in this research study.

5. Benefits

Upon receipt of the demographic survey, the General Perceived Self-Efficacy Scale, and the Watson-Glaser Critical Thinking Appraisal, Form S, participants will be entered into a raffle to win a gift certificate. There are no other benefits to the study participants.

6. Risks

This study will use a demographic form and two survey instruments to collect data. There are no known potential psychological, physical, and/or social risks or harm linked to this research.

7. Anonymity/Confidentiality

Personal demographic information for this study will be limited to age, gender, ethnicity, and socio-economic status. This data will constitute extraneous factors in this study and may serve to further explain results in this study and or provide information for future research endeavors. Therefore, the demographic data collected will remain confidential.

Each survey instrument coded individually to maintain the anonymity of each study participant. Data collected will be entered into a statistical analysis program (SPSS 11.0) with an assigned code to continue to maintain the anonymity of the study participants.

Participants in this study will anonymous. If a web master is hired to create a website for data collection purposes, a Third Party Confidentiality Agreement Form will be completed by the individual(s) involved in the creation of the secured website for online form and survey completion.

All data collected will be kept in a locked file in the researcher's house. Identification numbers and identifiers will be kept in a separate locked file in the researcher's house.

The researcher will secure the data in a locked file for a period of five years. At the conclusion of that time, all forms and data responses will be destroyed.

8. Consent

Please see the attached form:

- A cover letter explaining the purpose of the research project, the risks involved, the process and instructions for accessing the website in order to complete the surveys.
- Third Party Confidentiality Agreement Form

9. Certification

I certify that the protocol and method of obtaining informed consent as approved by the Institutional Review Board (IRB) will be followed during the period covered by this research project. Any future changes will be submitted to IRB review and approval prior to implementation. I will prepare a summary of the project results annually, to include identification of adverse effects occurring to human participants in this study. I have consulted with the department or program faculty/administrators and the Dean of the school which is to be the subject of research and have received prior approval to conduct the research and/or to disseminate the results of the study. A copy of that approval has been included with this protocol.

Principal Investigator

Date

APPENDIX F

BARRY UNIVERSITY

INSTITUTIONAL REVIEW BOARD
NOTIFICATION of ACCEPTANCE



Research with Human Subjects
Protocol Review

Date: November 22, 2006
Protocol Number: 06-11-25
Title: Investigating the Impact of Charter High Schools and Traditional Public High Schools on the Academic Achievement of First Semester Students at Four-Year Public Universities in Florida
Meeting Date: November 15, 2006
Researcher Name: Priva Fischweicher
Address: 1130 NE 176 Street
N. Miami Beach, FL 33162
Faculty Sponsor: Dr. Carmen McCrink
Adrian Dominican School of Education

Dear Ms. Fischweicher:

The members of the Barry University Institutional Review Board (IRB) reviewed your protocol at its convened meeting, on November 15, 2006. The proposal has been accepted as exempt pending receipt of the following changes:

- 1- Specify self-reporting.
- 2- All elements in the Cover Letter are there, but it does not direct the student to a website nor does it state the website.
- 3- Change Cover Letter from confidential to anonymous.
- 4- Specify how winner is randomly chosen and notified.
- 5- Where is flyer posted? Add contact name to flyer.
- 6- Informed Consent is not required.
- 7- Specify how participants win or don't win \$500.

All changes must be made to the protocol not the dissertation. Also, the changes must be provided to the IRB office in writing and approved prior to data collection. Please flag the changes made to the protocol so they can be reviewed quickly.

Regards,

Doreen C. Parkhurst, M.D., FACEP
Chair, Institutional Review Board

Assistant Dean, SGMS &
Program Director, PA Program
Barry University
Box SGMS
11300 NE 2 Avenue
Miami Shores, FL 33161

.....
cc: Faculty Sponsor

.....
If you have any questions, please contact Nildy Polanco at 305-899-3020

.....
Note: The investigator will be solely responsible and strictly accountable for any deviation from
or failure to follow the research protocol as approved and will hold Barry University harmless
from all claims against it arising from said deviation or failure.



Research with Human Subjects
Protocol Review

Date: December 1, 2006
Protocol Number: 06-11-25
Title: Investigating the Impact of Charter High Schools and Traditional Public High Schools on the Academic Achievement of First Semester Students at Four-Year Public Universities in Florida

Meeting Date: November 15, 2006
Approval Date: November 30, 2006

Name: Priva Fischweicher
Address: 1130 NE 176 Street
N. Miami Beach, Fl 33162

Sponsor: Dr. Carmen McCrink
Adrian Dominican School of Education

Dear Ms. Fischweicher:

The Board has accepted your protocol to be exempt from further review and you may proceed with data collection. Enclosed is the stamped Consent Cover Letter indicating that the IRB has reviewed and accepted your protocol. Please use this form when collecting your data.

As principal investigator of this protocol, it is your responsibility to make sure that this study is conducted as approved by the IRB. Any modifications to the protocol or consent form, initiated by you or by the sponsor, will require prior approval, which you may request by completing a protocol modification form.

It is a condition of this approval that you report promptly to the IRB any serious, unanticipated adverse events experienced by participants in the course of this research, whether or not they are directly related to the study protocol. These adverse events include, but may not be limited to, any experience that is fatal or immediately life-threatening, is permanently disabling, requires (or prolongs) inpatient hospitalization, or is a congenital anomaly cancer or overdose.

The approval granted expires on December, 2007. Should you wish to maintain this protocol in an active status beyond that date, you will need to provide the IRB with and IRB Application for Continuing Review (Progress Report) summarizing study results to date.

If you have questions about these procedures, or need any additional assistance from the IRB, please call the IRB point of contact, Mrs. Nildy Polanco at (305)899-3020 or send an e-mail to dparkhurst@mail.barry.edu. Finally, please review your professional liability insurance to make sure your coverage includes the activities in this study.

Sincerely,



Doreen C. Parkhurst, M.D., FACEP
Chair Institutional Review Board
Assistant Dean, SGMS &
Program Director, PA Program
Barry University
Box SGMS
11300 NE 2 Avenue
Miami Shores, FL 33161

cc: Faculty Sponsor

.....
Note: The investigator will be solely responsible and strictly accountable for any deviation from or failure to follow the research protocol as approved and will hold Barry University harmless from all claims against it arising from said deviation or failure.



Barry University
Institutional Review Board

11300 NORTHEAST SECOND AVENUE
MIAMI SHORES, FLORIDA 33161-6695
Direct (305) 899-3020
Fax (305) 899-3026

Research with Human Subjects
Protocol Review

To: Ms. Fischweicher
From: Doreen C. Parkhurst, M.D., FACEP
Chair, Institutional Review Board
Date: January 30, 2007
Protocol Number: 06-11-25
Protocol Title: Investigating the Impact of Charter High Schools and
Traditional Public High Schools on the Academic
Achievement of First Semester Students at Four-Year
Public Universities in Florida

Dear Ms. Fischweicher:

Thank you for informing us that you will be adding one Broward County charter school to your study. The change is accepted and you may continue with your study.

Sincerely,

Doreen C. Parkhurst, M.D., FACEP
Chair Institutional Review Board
Assistant Dean, SGMS &
Program Director, PA Program
Barry University
Box SGMS
11300 NE 2 Avenue
Miami Shores, FL 33161

If you have any questions, please contact Nildy Polanco at: 305-899-3020

Note: The investigator will be solely responsible and strictly accountable for any deviation from or failure to follow the research protocol as approved and will hold Barry University harmless from all claims against it arising from said deviation or failure.

Barry University
 Modification Form – Human subjects
 Institutional Research Board (IRB)

Investigator Information

Protocol Title: Investigating the Impact of Charter High Schools and Traditional Public High Schools on the Academic Achievement of First Semester Students at Four-Year Public Universities in Florida	Assigned # 06-11-25
Principal Investigator: Priva Fischweicher	Department/School: Adrian Dominican School of Education
Address: 1130 NE 176 Street North Miami Beach, FL 33162	Phone : 305 770 0294 or 305 725 0594 Email: Privaf770@aol.com
Supervising Professor: Dr. Carmen L. McCrink Co-investigators, if any: N/A	I have consulted with my supervising professor regarding this modification - yes


Type of Modification (check all that apply)

Please attach any revised documents (forms, scripts, advertisements, etc.)

<input checked="" type="checkbox"/>	New Procedures	Attach a description of the new procedure
<input type="checkbox"/>	Study Title Change	What is the new title?
<input type="checkbox"/>	Change in Study Personnel	Add or Delete (include the name, role, and contact information)
<input type="checkbox"/>	Change of Site	
<input type="checkbox"/>	Change in enrollment	Attach a narrative justifying the change
<input type="checkbox"/>	Consent Change	Attach a copy of the entire consent form highlighting your changes
<input type="checkbox"/>	Advertisement	Attach copies of the advertisement, bulletin, announcement etc.
<input type="checkbox"/>	Instruments including surveys, questionnaires, and tests	Attach copies of the revised instruments and describe the changes
<input type="checkbox"/>	Other	Describe specifically any additional changes not listed above

Print Name of Principal Investigator: Priva Fischweicher


 Signature of Principal Investigator

This area below  reserved for IRB Chair or Representative

Approved Approved pending additional changes Rejected



Signature of IRB Chair or Representative

APPENDIX G
BARRY UNIVERSITY
COVER LETTER – INFORMED CONSENT FORM

Barry University Cover Letter

Dear Research Participant:

Your participation in a research project is requested. The title of the study is "Investigating the Impact of Charter High Schools and Traditional Public High Schools on the Academic Achievement of First Semester Students at Four-Year Public Universities in Florida". The research is being conducted by Priva Fischweicher, a student in the Adrian Dominican School of Education department at Barry University, and is seeking information that will be useful in the field of education. The aim of the research is to investigate the effect of a charter high school education as compared to a traditional high school education on academic achievement, as measured by GPA, self-efficacy, and critical thinking of students attending four-year public universities in Florida at the conclusion of the first semester of their freshmen year. In accordance with this aim, the following procedures will be used: the participants will complete a demographic information form, complete the General Perceived Self-Efficacy Scale, complete the Watson-Glaser Critical Thinking Appraisal, Form S, and **self-reported GPA after your first semester at university**. We anticipate the number of participants to be a maximum of 400; 200 students who attended and graduated from a charter high school and 200 students who attended and graduated from a traditional high school. If you decide to participate in this research, you will be asked to do the following: complete a demographic information form, complete the General Perceived Self-Efficacy Scale, complete the Watson-Glaser Critical Thinking Appraisal, Form S, and **self-reported GPA after your first semester at university**. The estimated time required to complete the research procedures should not exceed sixty minutes.

Your consent to be a research participant is strictly voluntary and should you decline to participate or should you choose to drop out at any time during the study, there will be no adverse effects on your school performance.

There are no known potential psychological, physical, and/or social risks or harm linked to this research. Please note that you have the option not to participate. Although there are no direct benefits to you, your participation in this study may help our understanding of the charter school genre of educational institution.

As a research participant, information you provide will be held in confidence to the extent permitted by law. Any published results of the research will refer to group averages only and no names will be used in the study. Data will be kept in a locked file in the researcher's house. Any demographic information and/or identifiers will be kept separate from the data, in a locked file in the researcher's house. All data will be destroyed after five years. By completing and returning this survey you have shown your agreement to participate in the study.

If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Priva Fischweicher, at (305) 762-5179, my supervisor, Dr. Carmen McCrink, at (305) 899-3702, or the Institutional Review Board point of contact, Mrs. Nildy Polanco, at (305)899-3020.

Thank you for your participation.

Sincerely,

IRB

Date: 11/30/06

Signature: *Priva C. Fischweicher, M.D., Ph.D.*

APPENDIX H
MIAMI-DADE COUNTY PUBLIC SCHOOLS
RESEARCH REVIEW FORM

**Miami-Dade County Public Schools
RESEARCH REVIEW FORM
Research Review Committee**

<p>1. Title of research project: Investigating the Impact of Charter High Schools and Traditional Public High Schools on the Academic Achievement of First Semester Students at Four-Year Public Universities in Florida.</p>	<p>Request Number: _____ (MDCPS use only)</p>						
<p>2. Reason the project is being conducted (e.g., dissertation, comply with grant): Dissertation</p>							
<p>3. Name of university/agency with which applicant is affiliated (if applicable): Barry University</p>							
<p>4. Name, title and signature of the student advisor certifying that the Prospectus is acceptable (if applicable):</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; padding: 5px;">Dr. Carmen L. McCrink</td> <td style="width: 33%; padding: 5px;">Department Chair (Higher Education/ Educational Leadership)</td> <td style="width: 33%;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;">Name</td> <td style="text-align: center; padding: 5px;">Title</td> <td style="text-align: center; padding: 5px;">Signature</td> </tr> </table>		Dr. Carmen L. McCrink	Department Chair (Higher Education/ Educational Leadership)		Name	Title	Signature
Dr. Carmen L. McCrink	Department Chair (Higher Education/ Educational Leadership)						
Name	Title	Signature					
<p>5. Anticipated starting date: December 2006</p>							
<p>6. Anticipated completion date: December 2007</p>							
<p>7. What is the general purpose of the research? The purpose of this study is to investigate the effect of a charter high school education on the academic achievement of students attending four-year public universities in Florida at the conclusion of the first semester of their freshman year. Academic achievement will be measured by three diverse indicators; Grade point average [GPA], critical thinking, and self-efficacy.</p>							
<p>8. What are the primary questions to be addressed by the research? Is there a difference in the academic achievement as measured by cumulative GPA, self-efficacy, and critical thinking skills of students at four-year public universities in Florida who are graduates of externally-managed charter high</p>							

schools as opposed to students who are graduates of traditional high schools upon completion of their first semester of coursework during their freshman year at university?

Research Review Form

9. List the sources of data that are not dependent on school/district records. Note that copies of all instruments not reviewed in Mental Measurements Yearbook must accompany the Prospectus.

The General Self-Efficacy Scale

The Watson-Glaser Critical Thinking Appraisal, Form S

GPA after first semester at university

10. List the sources of data that are dependent on school/district records. Be specific (e.g., academic grades, attendance).

Records of the senior class of 2005-2006 that include:

Name of student

Address of student

University proposed to attend in the fall of 2006

Please note: This information will only be available to the gatekeepers

11. Indicate the number of participants/subjects in the research. Use the total column if the grade designation is not applicable.

K	1	2	3	4	5	6	7	8	9	1	1	12	TOTAL
---	---	---	---	---	---	---	---	---	---	---	---	----	-------

Grade

											0	1			
Students															400 maximum
Teachers															
Principals															
Parents															

Research Review Form

12. Is the applicant currently an employee of the Miami-Dade County Public Schools (MDCPS)?

Yes () No

13. What office/school level/s are targeted by the research?

() district office () elementary school () other: _____

() region office () middle school senior high school

14. Will the applicant need to enter an MDCPS school to conduct the research?

() Yes No

15. Will the research be confined to the MDCPS school where the applicant is employed?

() Yes No () Not applicable

16. Does the applicant intend to request that the district provide him/her with computer-generated data?

Yes () No

17. Estimate the amount of time the research project will require of each type of participant/subject.

Activity

18. What is the expected value of the research to education?

Myriad studies have been conducted to evaluate the efficacy of a charter school education with varied conclusions. Lin (2001), after conducting a meta-analysis of charter schools from three states, found discrepancies in some of the data reviewed, yet, the researcher concluded that this form of educational environment fulfilled its expectations. Hoxby (2004) found charter school students demonstrated higher levels of achievement on state exams than their counterparts in neighboring schools. Bifulco & Ladd (2005) established that students in North Carolina, after attending their first year at a charter school, had significantly lower scores on achievement tests than students attending traditional schools. Yet, studies that investigate academic achievement at the postsecondary level of students educated in a charter high school setting have not been actualized. This study will attempt to fill this gap in the research and may assist charter high school educators in evaluating their curricular objectives in order to produce students who are prepared to surmount the challenges of the higher education environment.

19. What is the expected value of the research to MDCPS?

This study may create a holistic perspective of the effect of a charter high school education on the academic achievement of those students when attending a higher educational institution. Premised on the efficacy of attaining a degree from a post secondary institution, one goal of a charter

	Testing/ Assessment	Training/ Inservice	Teaching/ Instruction	Other:	TOTAL
Students	60 minutes				60 minutes
Teachers					
Principals					
Parents					

school should be to prepare students with the skills and knowledge necessary to be successful at college or university. This study may serve to inform charter high schools educators involved in setting curricular objectives about the success of the present educational programs offered in their schools. Areas needing remediation may be revealed allowing for adjustments to the programs being offered.

20. Is the applicant available to appear before the research review committee?

Yes No

21. Beginning with the prospectus, list in order the titles of all the enclosed documents (e.g., instruments, parent permission form).

Prospectus

Application Identification Form

Research Review Form

Copy of General Perceived Self-Efficacy Scale

APPENDIX I

MIAMI-DADE COUNTY PUBLIC SCHOOLS
RESEARCH APPROVAL LETTER



Office of Program Evaluation
Executive Director
Dr. Jerome L. Levitt

Miami-Dade County School Board
Mr. Agustin J. Barrera, Chair
Ms. Perla Tabares Hantman, Vice Chair
Mr. Frank J. Bolaños
Ms. Evelyn Langlieb Greer
Dr. Robert B. Ingram
Dr. Martin Karp
Ms. Ana Rivas Logan
Dr. Marta Pérez
Dr. Solomon C. Stinson

Dr. Rudolph F. Crew
Superintendent
of Schools

December 18, 2006

Priva Fischweicher
1130 NE 176 Street
North Miami Beach, FL 33162

Dear Ms. Fischweicher:

I am pleased to inform you that the Research Review Committee of the Miami-Dade County Public Schools (MDCPS) has approved your request to conduct the study, "Investigating the Impact of Charter High Schools and Traditional High Schools on the Academic Achievement of First Semester Students at Four-Year Public Universities in Florida." The approval is granted with the following conditions:

1. The participation of all subjects is voluntary.
2. The anonymity and confidentiality of all subjects must be assured.
3. The study will involve approximately 400 former MDCPS students.

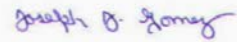
It should be emphasized that the approval of the Research Review Committee does not constitute an endorsement of the study. It is simply a permission to request the voluntary cooperation in the study of individuals associated with the MDCPS. It is your responsibility to ensure that appropriate procedures are followed in requesting an individual's cooperation, and that all aspects of the study are conducted in a professional manner. With regard to the latter, make certain that all documents and instruments distributed within the MDCPS as a part of the study are carefully edited.

The approval number for your study is 1305. This number should be used in all communications to clearly identify the study as approved by the Research Review Committee. The approval expires on June 30, 2008. During the approval period, the study must adhere to the design, procedures and instruments which were submitted to the Research Review Committee. If there are any changes in the study as it relates to the MDCPS, it may be necessary to resubmit your request to the committee. Failure to notify me of such a change may result in the cancellation of the approval.

1500 Biscayne Boulevard, Suite 225 • Miami, Florida 33132
305-995-7501 • FAX 305-995-7571 • jlevitt@dadeschools.net

If you have any questions, please call me at (305) 995-7501. Finally, remember to forward an abstract of the study when it is complete. On behalf of the Research Review Committee, I want to wish you every success with your study.

Sincerely,



Joseph J. Gomez, Ph.D.
Chairperson
Research Review Committee

JJG:fp

APPROVAL NUMBER: 1305

APPROVAL EXPIRES: 6-30-08