

CORRELATES OF TEXAS STANDARD AP CHARTER CAMPUSES AND HOW THEY
COMPARE WITH STANDARD AP TRADITIONAL PUBLIC CAMPUSES

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The research sought to objectively evaluate the effectiveness of Texas standard AP open-enrollment charter school campuses and to discover independent variables that may be utilized to predict effective charter school campuses. The data items used in the analyses were downloaded from the 2007-2008 Academic Excellence Indicator System (AEIS), which contains a variety of data from all Texas public schools. Multiple statistical analyses were utilized including chi-square, ANOVA, multiple regression and discriminate analysis.

In order to evaluate Texas standard AP open enrollment charter campuses, their accountability ratings were compared with those of standard AP traditional public school campuses. The research evaluated twelve independent variables for charter schools to determine their relationship to accountability ratings, thereby providing charter operators indicators or predictors of accountability ratings to facilitate better academic quality. By analyzing the same variables for traditional public schools as charter schools, a baseline model was developed to compare the similarities and differences with the results of the charter school analyses.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
Chapter	
1. INTRODUCTION	1
Introduction.....	1
School Choice	2
Politics.....	3
Growth	4
Purpose and Rationale	6
Problem Statement.....	7
Research Questions.....	8
Overview of Methodology.....	9
Limitations and Assumptions	10
Definition of Terms	11
Organization of the Study	13
2. REVIEW OF LITERATURE	14
Introduction.....	14
History of Charter Schools	14
Ray Budde.....	14
Albert Shanker	16
The Beginning.....	18
What is a Charter School?	19
Purpose.....	19
Founders or Sponsors.....	21
Types of Texas Charter Schools	21
Home Rule School District Charter	21
Campus Charter	22
Open-enrollment Charter	22

University Charter.....	22
Funding	23
Who Can Attend?.....	24
Laws	25
Pros and Cons of Charter Schools	26
National Charter Schools	29
Characteristics.....	29
Teachers	32
NAEP 2003 Pilot Study	34
4 th Grade Reading Results.....	35
4 th Grade Math Results	36
Hierarchical Linear Modeling.....	37
Summary	38
Texas Charter Schools	38
Characteristics.....	42
Enrollment.....	43
Staff.....	45
Principal and Parent Survey	46
Academics.....	48
Summary	51
3. METHODOLOGY	53
Introduction.....	53
Research Questions and Hypotheses	54
Data Collected.....	55
Research Variables and Measurement	56
Research Question 1	58
Research Questions 2 and 3	60
Summary.....	62
4. RESULTS	63
Introduction.....	63
Descriptive Statistics of Variables	63

Mean Accountability Rating	65
Ethnicity and Special Populations	65
Salary, Tenure and Experience	65
Research Question 1	66
Chi-square	66
ANOVA	69
Discussion	70
Research Question 2	70
Multiple Regression	71
Discriminant Analysis.....	75
Discussion	76
Research Question 3	77
Multiple Regression	78
Discriminant Analysis.....	82
Discussion	84
5. CONCLUSION & DISCUSSION	86
Introduction.....	86
Findings	88
Descriptive Statistics.....	88
Research Question 1	90
Chi-Square	90
ANOVA	91
Research Questions 2 and 3	92
Multiple Regression	92
Conclusion	94
Recommendations.....	99
APPENDICES	103
REFERENCES	128

LIST OF TABLES

Table 2.1 <i>Type of Texas Charter School by Level</i>	40
Table 2.2 <i>Number of Standard AP & Alternative AP Charter Schools</i>	41
Table 2.3 <i>Enrollment per Campus & 75% Rule Charter Schools</i>	42
Table 2.4 <i>Enrollment per Grade Level by Assessment Type</i>	44
Table 2.5 <i>Campus Rating 2004-2007</i>	49
Table 3.1 <i>Variable Description</i>	58
Table 4.1 <i>Descriptive Statistics</i>	64
Table 4.2 <i>Accountability Ratings Crosstabulation</i>	67
Table 4.3 <i>ANOVA Summary Table</i>	70
Table 4.4 <i>Simultaneous Multiple Regression Coefficients</i>	73
Table 4.5 <i>Backward Multiple Regression Model Summary</i>	74
Table 4.6 <i>Model 6 Coefficients</i>	75
Table 4.7 <i>Tests of Equality of Group Means</i>	76
Table 4.8 <i>Wilks' Lambda Test of Functions</i>	76
Table 4.9 <i>Forward Multiple Regression Models</i>	81
Table 4.10 <i>Multiple Regression Coefficients</i>	82
Table 4.11 <i>Tests of Equality of Group Means</i>	83
Table 4.12 <i>Wilks' Lambda Test of Functions</i>	83

LIST OF FIGURES

Figure 1.1. Number of Charter Schools – National.....5

Figure 1.2. Number of Charter School Campuses – Texas5

Figure 2.1. Student Ethnicity: Charter Compared to Traditional Public 1999-2000.....31

Figure 2.2. Student Demographics: Charter Schools Compared to Traditional Public Schools
1999-200032

Figure 2.3. Charter School ECON and IEP Student Percentages from 1998-99 to 2001-2002...32

Figure 2.4. Teacher Characteristics Traditional Public Compared to Charter Schools
1999-200033

Figure 2.5. 4th Grade NAEP Student Characteristics35

Figure 2.6. 4th Grade NAEP Reading Results36

Figure 2.7. 4th Grade NAEP Math Results.....37

Figure 2.8. Number of Texas Charter Schools by Academic School Year43

Figure 2.9. Student Discipline Principal Survey47

Figure 2.10. TAKS Passing Rate Standard AP Open-Enrollment Charter vs.
Traditional Public.....50

Figure 2.11. TAKS Passing Rates after Three Consecutive Years51

CHAPTER 1

INTRODUCTION

Introduction

Education reform is a consistent theme surrounding all aspects of K-12 education in the United States. Whether conveyed through political rhetoric, media communication and images, or substantiated facts and data, a cry for change reverberates in education circles that is difficult if not impossible to ignore. Sometimes a request for change represents change for the sake of change rather than for the improvement of academic achievement. Change developed out of a fad has been abandoned as quickly as it began. However, some education reforms have significantly and permanently impacted public education in America. Determining which reform movements are substantial and permanent as compared to trendy and rapidly fading movements can be difficult. In recent years, education reform has adopted a new name called school choice. Although not a new concept, school choice has evolved into a reform movement with both a loyal, passionate following and strong opposition (Godwin & Kemerer, 2002). This research focused on school choice related to charter schools and reviews their history, operations, growth and performance. Furthermore, the study compared the accountability ratings of Texas standard accountability procedures (AP) open-enrollment charter campuses with Texas standard AP traditional public campuses and determined if there is a statistically significant difference. Finally, the research utilized statistical analyses to determine the effect of twelve independent variables as listed in Table 3.1 on accountability ratings for both Texas standard AP open-enrollment charter campuses and Texas standard AP traditional public campuses.

School Choice

School reform has played a substantial role in the development of the American public education system by causing paradigm shifts in aspects of public education. Events such as the launching of *Sputnik* and the release of the *A Nation at Risk* report spurred changes that brought some progress to the public school system (National Commission on Excellence in Education, 1981, p. 1). Change usually encounters resistance, for it challenges the inner feelings, thoughts and emotions of stakeholders. School choice, which is itself an instrument of and for change, has also been met with questions, challenges and outright hostility (Fossey, 2006, pp. 12-14).

Not unlike many previous reform movements, school choice stirs much emotion and debate within the educational community. School choice is a large umbrella that encompasses several options, including open-district transfer policy, magnet schools, home schools, private schools, vouchers and charter schools.

In 1962, Milton Friedman, a Nobel Laureate economist, opined an argument for school choice in his book, *Capitalism and Freedom*. He argued that public funding of schools is justified because quality education contributes to the well-being of society as a whole. “A stable and democratic society is impossible without a minimum degree of literacy and knowledge on the part of most citizens and without widespread acceptance of some common set of values” (Friedman, 1962, p. 194).

However, Friedman (1962) argued that public funding of education did not mean that schools had to be operated and monopolized by the government. “Parents could express their views about schools directly by withdrawing their children from one school and sending them to another, to a much greater extent than is now possible” (p. 197). This choice forces schools to either improve or cease to exist, similarly to businesses in a free market economy. The premise

of school choice in general and charter schools in particular is that choice provides an option to the stakeholders, (i.e., parents, students, and the community) to participate in greater opportunities for quality education. School choice follows the premise of a free-market business model, that competition will spark improvement in all schools, thereby promoting the academic achievement of all students.

Proponents of charter schools believe that charters have the ability to bring sustainable positive reform to public education. Reform through school choice is different from previous reform efforts that modified surface elements of the current system, such as the length of the school day, graduation requirements, teacher certification requirements, etc. Some public perception views the current public education system as a type of monopoly which inhibits innovation and competition, similar to a monopoly in the public marketplace. Charter schools provide a framework which allows educators to work outside the traditional public education system to encourage innovation and competition.

Politics

The establishment of charter schools represents an important educational issue in American politics. In his 1999 State of the Union address, President Bill Clinton attributed the creation of 1,100 new charters to support from both Democrats and Republicans (Bill Clinton, 1999, ¶ 47). Furthermore, in his 1997 State of the Union Address, President Clinton expressed his support for school choice through charter schools and expounded that his education initiative would establish 3,000 charter schools by the early 21st century. Although this goal was not attained, Bill Clinton remained a staunch charter school advocate:

Their right to choose will foster competition and innovation that can make public schools better. We should also make it possible for more parents and teachers to start charter schools, schools that set and meet the highest standards, and exist only as long as they do. Our plan will help America to create 3,000 of these charter schools by the next century --

nearly seven times as there are in the country today -- so that parents will have even more choices in sending their children to the best schools (Bill Clinton, 1997, ¶ 38).

In the 2000 United States presidential election, both George W. Bush and Al Gore supported charter schools as a method of school choice. Although Barak Obama opposed school vouchers and John McCain favored them in the 2008 U.S. presidential election, both candidates supported charter schools and school choice. In the presidential forum at Saddleback Church in 2008 attended by both candidates, Senator McCain opined the following viewpoint:

Choice and competition. Choice and competition. Choice and competition. Home schools, charter schools, vouchers...all the choice and competition. I want every American family to have the same choices that Cindy and I made and that Senator Obama and Mrs. Obama made as well. And that was that we wanted to send our children to the school of our choice. Charter schools work, my friend ...it's all based on choice and competition, and it's been proven that choice and competition for every American family [works]. I want choice to be available for every American family, and it is a civil rights issue of the 21st century because every citizen's child now has an opportunity to go to school. But what kind of opportunity is it if you have to send them to a failing school? That's why we've got to give everybody the same opportunity and choice. (John McCain, 2008, ¶ 28).

Growth

Evidence regarding the significance of charter schools in America and Texas is characterized by remarkable growth. Since their inception in 1992 in the state of Minnesota, charter schools are now in 40 states and the District of Columbia with 4,213 charter schools and an estimated enrollment of 1,341,687 students (Center for Education Reform [CER], 2008).

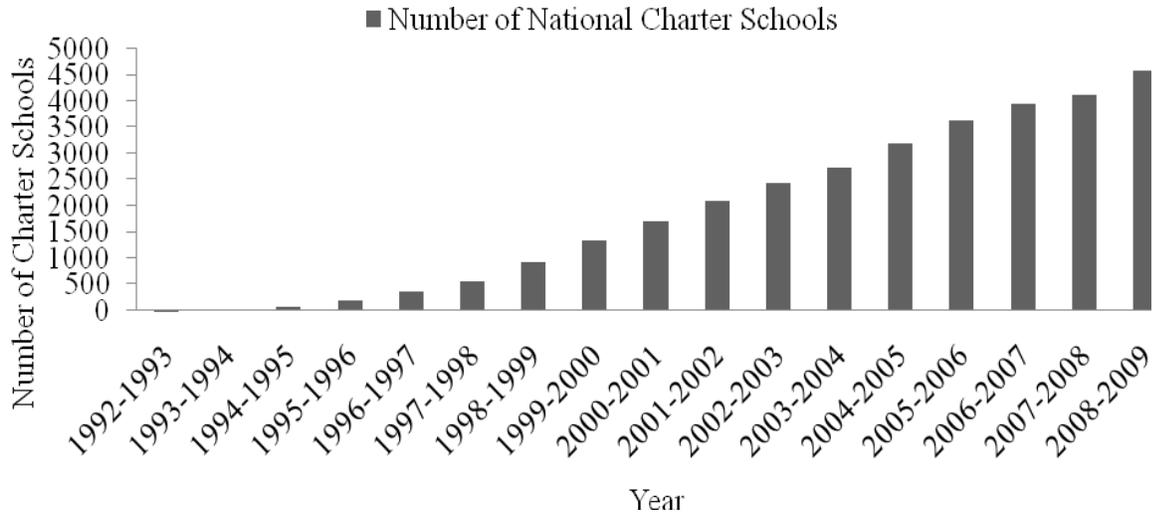


Figure 1.1. Number of charter schools – national, From *Operational Schools by Year Opened*, *National Charter School Data*, *National Charter School Data At-A-Glance*, and *Charter School Enrollment and Closures, by State* by Center of Education Research (2005, 2008) and National Center of Educational Statistics (2007).

Seventeen charter schools opened in Texas in the 1996-1997 school year. In twelve years the numbers of charter campuses in Texas increased to 513 in 2008-2009.

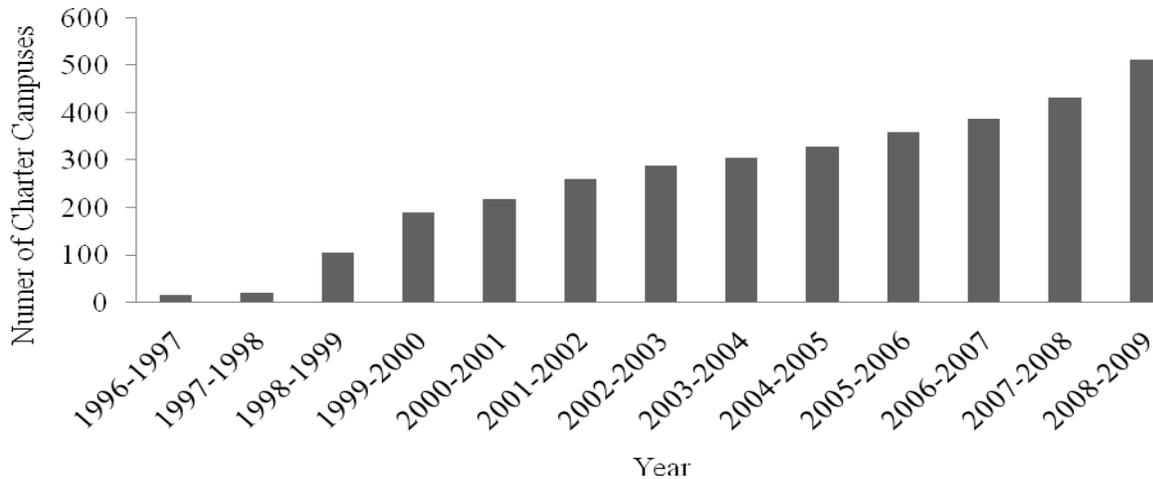


Figure 1.2. Number of charter school campuses – Texas. From *Texas charter schools: 2006-2007 evaluation* by Brinson et al., (2008), *Calculating the demand for charter schools* by Terry & Alexander (2008) and Resource Center for Charter Schools.

Purpose and Rationale

The research has three main objectives. First, the specialization and variety of Texas charter schools complicate a fair comparison with traditional public schools. With the abundance of negative press highlighting failing charter schools, it is important to create a fair comparison between charter campuses and traditional public campuses by focusing on a specific type of charter. Therefore, this study examines the effectiveness of charter schools, with a special emphasis on Texas standard AP open-enrollment charter schools and their comparison to traditional public schools.

Next, based on the accountability ratings of charter schools, a significant discrepancy exists between effective and ineffective charter schools. This discrepancy may be due to the disparity among charter operators and their practices. It would be beneficial to the charter school community to determine which variables may be correlated with accountability ratings. Therefore, this research analyzes selected variables as displayed in Table 3.1 to determine if they are correlated to accountability ratings.

Finally, charter schools have only been in existence a relatively short period of time, especially in comparison to traditional public schools. Traditional public schools do not have the same disparity between schools and accountability ratings. Therefore, this study provides charter campuses a model for comparison with traditional public campuses. The study of traditional public school campuses includes the same statistical analyses and variables that were used for the charter campuses. The results were compared and contrasted with the results from the charter school campus analyses. It is hoped that this research provides a valuable evaluation for charter operators, leading to better academic quality for students and thereby higher accountability ratings.

Problem Statement

The first problem is rooted in the lack of objective analysis and perception of charter schools. Information about charters usually comes by way of a news report of a failing charter. Much of the research today is often biased based on the source either for or against charters. Therefore, charters do not receive a fair evaluation and the education reform movement becomes jeopardized. The research seeks to objectively evaluate the effectiveness of Texas standard AP open-enrollment charter school campuses by comparing their accountability ratings with those of standard AP traditional public school campuses.

Another problem is the need for research to determine which practices may lead to better academic results for charter schools. As a relatively new venture, charter schools pose a risk. If charter schools are failing, then students and parents involved in them have been disserved, assuming that their local public schools provide a quality education. Many charters were started by organizations that had little experience in public education. Although the heart and passion of charter founders focused on assisting children, parents and the community, many founders lacked the expertise to implement the desires of their heart.

In the first five years of implementation, the growth of open-enrollment charter schools in Texas was exponential, and the application process was inadequate to identify poor quality charter school operators. The state authorized many charters to founders without the educational or business background, expertise, and resources to successfully operate a school. “The reduced scrutiny given to charter school authorization during this period enabled the creation of a number of poor quality charter schools” (Texas Center for Educational Research, 2008, p. 20). Charter school leaders need research regarding variables that lead to more effective results. Therefore, this research evaluates twelve independent variables from charter schools to determine their

relationship to accountability ratings, thereby providing charter operators indicators or predictors of accountability ratings to facilitate better academic quality.

Texas open-enrollment charter schools have demonstrated mixed results. The accountability ratings indicate a large discrepancy between effective and ineffective charters. A significant proportion of charter campuses have attained the best rating of “exemplary” or the worst rating of “academically unacceptable.” The number of failing charters is a serious problem which emphasizes the need for more research to provide assistance for improvement. Traditional public schools have demonstrated greater longevity and stability than charter schools. Furthermore, traditional public schools have less variance in accountability ratings. Analyzing the same variables for traditional public schools that were analyzed for charter schools and their effects on accountability ratings could provide a model of comparison for charter schools. Therefore, this study evaluates twelve independent variables to determine their relationship to accountability ratings, thereby providing a baseline model to compare the similarities and differences between charter schools and traditional public schools in relation to the outcomes of the analysis.

Research Questions

1. Is there a statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses?

H₁ There is no statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses.

2. Are there any statistically significant correlations between chosen predictor variables (average student/teacher ratio, percentage expenditure on instruction, average teacher experience, average teacher tenure, average teacher salary, average administrator salary, percentage of at-risk

students, percentage of limited English proficiency (LEP) students, percentage of economically disadvantaged students, percentage of White students, percentage of Black students, percentage of Hispanic students) and accountability ratings for Texas standard AP open-enrollment charter campuses?

H₂ There are no correlations between the chosen predictor variables and accountability ratings for Texas standard AP open-enrollment charter campuses.

3. Are there any statistically significant correlations between chosen predictor variables (average student/teacher ratio, percentage expenditure on instruction, average teacher experience, average teacher tenure, average teacher salary, average administrator salary, percentage of at-risk students, percentage of LEP students, percentage of economically disadvantaged students, percentage of White students, percentage of Black students, percentage of Hispanic students) and accountability ratings for Texas standard AP traditional public school campuses?

H₃ There are no correlations between the chosen predictor variables and accountability ratings for Texas standard AP traditional public school campuses.

Overview of Methodology

The methodology for this research is both descriptive and quantitative and includes multiple statistical analyses and interpretation of data. The primary source of the data came from the Academic Excellence Indicator System (AEIS), which is the compilation of data from all Texas public schools as required by the Texas Education Agency (TEA). The data were utilized to compare the accountability ratings between charter campuses and traditional public campuses to determine if there is a statistically significant difference in the ratings category. Subsequently, twelve independent variables: a) student/teacher ratio, b) percentage of instructional expenditure, c) average teacher experience, d) average teacher tenure, e) average teacher salary, f) average administrator salary, g) percentage of at-risk students h) percentage of limited English proficient students, i) percentage of economically disadvantaged students, j) percentage of White students,

k) percentage of Black students and l) percentage of Hispanic students, from both charter campuses and traditional public campuses will be analyzed to determine correlations with accountability ratings. Finally, a comparison of the results of the correlations between charter campuses and traditional public campuses will be reviewed to determine similarities and differences.

Limitations and Assumptions

The AEIS data is mostly self-reported and therefore may contain a few errors. However, due to the sample size and the statistical reports used by the state of Texas, the errors are likely to be negligible to the research.

The data was limited to the 2006-2007 school year. Therefore, the results are limited to one point in time rather than a longitudinal study. Furthermore, the focus of the study is on Texas open-enrollment standard AP charters campuses which, other than the literature review, eliminates from the research all university charters, charters operated under an independent school district (ISD), alternative education campuses and charters outside of Texas.

The ANOVA test run had an $\alpha = .001$ for the Levene's homogeneity of variance assumption, which is a little less conservative than the $\alpha = .05$ level. However, the chi-square was also used to verify the significance of the relationship between accountability ratings and the designation of a school as a charter campus or traditional public campus.

For full disclosure, the reader should know that I have worked in a charter school for the last nine years. Therefore, as a researcher, I have to be careful not to inject any bias in the information reported and use professional, logical research techniques. I acknowledge the potential for bias and error.

Definition of Terms

Academic Excellence Indicator System Report (AEIS Report). An annual report produced by the Texas Education Agency (TEA) to report data from Texas public schools. This data includes Texas Assessment of Knowledge and Skills (TAKS) scores, attendance rates, dropout and completion rates, as well other quantitative data (TEA, 2008, overview).

Accountability rating. Ratings given by TEA to public schools based on indicators including TAKS test results, completion rates, SDAA test results and 7th & 8th grade drop-out rates. The ratings based on the TAKS tests are also broken down by ethnicity and low socio-economic status (SES) (TEA, 2008, p. 1).

Authorizer. The government entity granted authority to approve charter applications. In Texas, the SBOE (State Board of Education) approves charter school applications. In some states, the local school district may be the authorizer.

Center for Education Reform (CER). The CER is a non-profit organization which advocates school choice and charter schools through its influence with policy makers, parents and media. “The Center for Education Reform changes laws, minds and cultures to allow good schools to flourish” (CER, n.d., ¶ 3).

Charter. Legal document between the founder and authorizer as to the type of school the charter will be. This document may include the charter school’s purpose, target population, methodology, expected results, measurability of results, qualifications of teachers, curriculum, etc., and provides the blueprint for the mission, design and operation of the charter school.

Charter school. An autonomous public school of choice formed on the basis of its charter with the state and expected to produce results through innovative education in return for freedom from many of the regulations and laws that apply to traditional public schools. Unless

otherwise noted, the research portion will focus on Texas open-enrollment charter schools which are not connected to a school district or university.

The U.S. Department of Education (ED). The ED is a cabinet level department that began in 1980 after its formation was signed into law by Jimmy Carter. The ED promotes federal education policy and programs including civil rights and privacy. Currently the ED is best known for the “No Child Left Behind” education initiative (Wikipedia, n.d.).

Free and reduced lunch. The free and reduced lunch federal program provides meals through schools for socio-economically disadvantaged children. Students eligible for free and reduced lunch comprise a socioeconomically disadvantaged sub-category for performing data desegregation and analysis.

The National Assessment of Educational Progress (NAEP). The NAEP “is the only nationally representative and continuing assessment of what America's students know and can do in various subject areas....Since NAEP assessments are administered uniformly using the same sets of test booklets across the nation, NAEP results serve as a common metric for all states and selected urban districts” (IES National Center for Education Statistics, n.d.)

SBOE (State Board of Education). “Composed of 15 members elected from roughly equally populous State Board of Education districts, the Board adopts rules and establishes policies that govern a wide range of educational programs and services provided by Texas public schools. The Commissioner of Education serves as Chief Executive Officer of the Board and supervises the administration of Board rules through the Texas Education Agency” (TEA, n.d.).

Texas Assessment of Knowledge and Skills (TAKS). The standardized test given to 3rd through 11th grade students in Texas public schools, including charter schools. The TAKS test is

used to determine accountability ratings, graduation requirements and standards for certain grade level promotions.

Texas Education Agency (TEA). A branch of the Texas government assigned the responsibility to oversee all Texas public schools including charter schools. The agency is managed by the Commissioner of Education, a position appointed by the Texas governor (Wikipedia, n.d.).

Organization of the Study

The remainder of the study is organized into four additional chapters. Chapter 2 is a review of literature detailing the historical development, characteristics, and purposes of charter schools. The descriptive history includes literature of charters nationally and in Texas with a description of the performance up to the present. Chapter 3 describes the methodology used in this research and includes the research questions and hypotheses, data collected, variables and design. Chapter 4 presents the results of the statistical analysis. Chapter 5 discusses the findings, draws conclusions and provides recommendations for further research.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

The literature review is designed to enhance the current understanding of charter schools and therefore facilitate a more effective evaluation of them. A basic knowledge and understanding of the origins, characteristics and purposes of charters allows for a more objective analysis. The literature review covers the history of charters including their founders, characteristics, and growth patterns. The discourse also attempts to answer the question “What is a charter school?” and to provide a thorough overview of the purpose and original intent of charter schools. Furthermore, the literature review examines the performance results and effects of charter schools. Included in this review is an examination of the impact of charters on the public education system and school reform. Finally, the literature regarding the pros and cons of charter schools is used to reflect diverse perspectives of both the proponents and opponents of the charter school movement.

History of Charter Schools

Ray Budde

In recent history the idea of charter schools originated with retired school teacher and university professor Ray Budde. In the 1970s he first introduced his concept of a charter school to some of his friends and colleagues. Ray Budde received very little attention or feedback from those with whom he shared his ideas (Budde, 1996, initial proposals). However, he later revisited his concepts in the 1980s in a book published by the Northeast Regional Laboratory entitled *Education by Charter: Restructuring School Districts* (1988).

Ray Budde's first concept of a charter was a program within a school rather than a separate school or district, in which teachers would have a contract or charter with the school board. He defined an "educational charter as 'a written instrument used by a school board to directly fund a team of teachers to carry out an educational program for a period of three-to-five years'" (Budde, 1988, p. 52). As long as the charter produced desired outcomes, it would have academic freedom and local autonomy, free from the oversight of the principal and central administrators.

In his book, Ray Budde (1988), uses the charter or contract between Henry Hudson and the East India Company to illustrate his idea of education by charter. In his analogy, Budde lays out eight comparisons:

1. First of all, there is a grantor—a person or group in authority...In a school district, the grantor would be the duly elected school board of the community.
2. The charter was granted to the grantee—someone with a vision or a plan...In a school district, the grantees would be teams of teachers with visions of how to construct and implement more relevant educational programs or how to revitalize programs that have endured the test of time.
3. The charter usually called for exploration into unknown territory and involved a degree of risk to the person undertaking the exploration... "Education by Charter" is a vehicle for us to use to launch into the future and this cannot be done without taking some risks.
4. A charter implied both the idea of a franchise and the idea of competition.
5. The grantor of the charter provided the supplies and resources for the enterprise.
6. The charter contained within it specific directions for the grantee and a definite length of time for him to complete the activity.
7. The charter spelled out in detail the pay or rewards for the explorer...I think that Education by Charter can be the catalyst which will help us turn the corner in making teaching into a full-time, full-year profession.

8. The charter provided a means for the explorer to be accountable to the grantor for results in a very specific way...Any program evaluation or accountability system controlled by those being evaluated or being held accountable is simply not creditable. (pp. 49, 51)

Albert Shanker

The charter school concept remained dormant until it was re-discovered by Albert Shanker, the former president of the American Federation of Teachers (AFT). He presented the concept of a charter in his address to the National Press Club on March 31, 1988 (Kahlenberg, 2007, the charter school idea). Following the National Press Club speech, Shanker addressed the idea with the influential teachers' union, AFT, at its 70th national convention in 1988, which he summarized in his weekly column in the *New York Times* (Shanker, 1988, ¶ 2).

Shanker was inspired by the Holweide Comprehensive School, a school he visited in Cologne, Germany. Although not a charter school, it exhibited an innovative approach to education as compared to other German and American schools. While not advocating the duplication of this particular school in America, Shanker promoted its educational atmosphere that fostered innovation and diverse, creative teaching models and methodologies. He was convinced that the current educational system was ineffective and could not be fixed by traditional reform measures. Shanker knew that the current system would not allow for innovations like the ones he witnessed in Germany. Therefore, he recommended that the educational system be enhanced by the incorporation of the charter school concept.

Clearly, we need to do things differently. But that is not a matter, as the current education reform movement assumes, of fixing individuals or things, of getting 'better' teachers or textbooks and the like. Rather, it involves encouraging structural changes that permit individuals to function differently and to change things, including their practice. (Shanker, 1988, p. 94)

For Shanker, the motivation behind establishing charter schools was to create an avenue whereby teachers could creatively break free from the constraints of the current system, and

leave everything on the table as subject to change. The following quote by Shanker (1988) from his article published in the *Peabody Journal of Education* expounds on this premise:

Our school system has to create the opportunity for rethinking and for trying new approaches as a permanent feature of each and every school. This in no way means going back to the 1960's and giving every teacher and student a license to 'do their own thing' without supervision or accountability. It does mean giving every faculty the opportunity and necessary help to uncover the fixed assumptions and practices of schooling and their persistent problems. It means giving them the chance to exhume for analysis policies and practices that everyone now reflexively follows but no one remembers any more how and why they're in place to what end. It means giving them the latitude to abandon things we know about how student engage and learn... The efforts for district-wide restructuring should, and must, continue. But short of the ideal, here is another suggestion for getting started. Why not devise a district policy mechanism to enable any school or any group of teachers, say, 6-12 within a school to develop a proposal for how they could better educate youngsters and then give them a 'charter' to implement that proposal? (pp. 97-98)

The charter concepts of Albert Shanker and Ray Budde were similar in describing a charter as a teacher-driven contract negotiated directly with the local school board and sponsoring teachers. Albert Shanker also included the union as part of the agreement procedure with the board and teachers. Shanker's concept of a charter school advanced beyond the concept of Ray Budde's charter program in defining a charter school as a separate school operating as an autonomous "school-within-a-school" without necessarily sharing the same building or using that terminology (Shanker, 1988, ¶ 4).

Charter schools today have evolved significantly from the original concept. For example, open-enrollment charter schools in Texas are not tied to the local school district or school board at all. The charter evolution did not follow the original vision of either Shanker or Budde. In fact, some of the concepts of charter schools are in direct conflict with the goals of teacher unions, including the AFT. For example, some charters have "at-will" teacher contracts, which allows charter administrators to terminate non-productive teachers without cumbersome and onerous red tape. Richard Kahlenberg (2007), author of *Tough Liberal: Albert Shanker and the*

Battles Over Schools, Unions, Race, and Democracy, a biography of Albert Shanker, expresses his view.

Charter schools were not empowering teachers; they were trying to undercut teacher unions. They were not providing innovative and creative ways of teaching an agreed-upon curriculum; they were creating their very own curricula. And there was no evidence that the experiments were raising student achievement, the ultimate test. So in the final years of his life, Shanker turned away from charters... (p. 7).

Although charter schools have evolved well beyond the original vision of either Budde or Shanker, they still capture the fundamental principles of the original charter concept, including autonomy, accountability and innovation. Charters have a unique opportunity to accomplish the ultimate dream of both of these visionaries for true educational reform and innovative, effective instruction.

The Beginning

According to Schroeder (2004), Minnesota was the first state to adopt charter school legislation. However, charters were only part of a larger school choice policy initiated by Minnesota years earlier. In the late 1980s, the “legislature authorized the nation’s first statewide interdistrict open enrollment program, which was phased-in for all school districts” (p. 23). Similar to open-enrollment charter schools, this program allowed for students to attend schools outside their attendance zones. Minnesota operated other alternative schools that enrolled up to 21.5 percent of the state’s student population outside of the school districts (p. 23). Therefore, school choice for Minnesota with the introduction of charter schools was not new.

Shroeder (2004) notes that Albert Shanker, credited earlier with promoting the concept of charter schools, also played a direct role in influencing the creation of the first charter legislation in Minnesota. In response to an invitation to speak at the Itasca Seminar in 1988, Shanker introduced his charter school concept to a group of educational stakeholders which included

“business leaders, educators, and policymakers” and politicians. The Citizens League, some of whose members were present in Shanker’s presentation, had been working on a charter school proposal, which was introduced as a bill by two members of the legislature (p. 25). Although the proposal did not pass both houses of the state legislature initially, the bill eventually passed with some compromises in an omnibus education bill in 1991 (p. 26).

The first bill passed included some significant compromises to the charter school legislation. The most significant changes stated that charters had to be approved by the local school district and only eight charters could be approved. Even with these constraints, the first charter was granted by the state to Bluffview Montessori in Winona in December, 1991. However, the first charter school in the nation to open was City Academy in St. Paul in the fall of 1992 (p. 26). Since that time, the charter laws in Minnesota have been strengthened and the numbers of charter schools in Minnesota and across the nation have proliferated.

What is a Charter School?

A charter school is first and foremost a public school. The term charter comes from the fact that the sponsoring entity writes a “charter” or a contract typically between the sponsoring agency and the state, “detailing the school’s mission, program, goals, students served, methods of assessment, and ways to measure success” (US Charter Schools, n.d., overview).

Purpose

The purpose of charters is to provide a forum for educational reform by bringing the business model of competition into the closed educational system. The bottom line for all reform is change for the better; therefore, in education reform the primary purpose is to increase student achievement. The goal of charter schools is not solely to improve student achievement with the students who attend a particular charter school, but also to enhance and improve public education

at all schools and motivate traditional public schools to improve student success in learning through competition. Prior to the advent of the modern charter school movement, traditional public schools had very little external motivation to improve. Although traditional public schools employed many highly motivated, dedicated and skilled educators, the competition for students and funding from charter schools raised the stakes for all public schools to become more effective educational institutions.

Most middle class and low income families have had few options for educating their children other than to send them to their neighborhood school. Just as monopolies in the business community are viewed negatively for stifling competition, lacking innovation and deemphasizing customer service, public schools are also perceived as representing a monopoly in education which lacks the motivation to improve or suffer the consequence of “going out of business” as exists in the free marketplace. The threat of losing students and their accompanying funding may motivate traditional public schools to become more innovative and improve student learning performance. With private schools relatively few in number and cost prohibitive, they do not pose an incentive for greater accountability in the traditional public schools. Since charter schools are tuition-free, any student can afford to attend.

The Texas Education Agency lists five reasons for the existence of charter schools:

(1) improve student learning; (2) increase the choice of learning opportunities within the public school system, (3) create professional opportunities that will attract new teachers to the public school system; (4) establish a new form of accountability for public schools; and (5) encourage different and innovative learning methods (TEA, n.d., faqs).

Charters also are encouraged to be innovative in their methodologies. There are some charters which target specific student populations such as at-risk students and establish an identity as dropout prevention or credit recovery schools. Furthermore, some charters focus on specific curriculum areas such as fine arts, foreign language, Afro-Centric curriculum,

math/science, and technology. Other charters may emphasize a more traditional curriculum approach while incorporating distinguishing characteristics and/or programs to enhance the learning environment and thereby increase academic achievement.

Founders or Sponsors

A charter application may be written by nearly anyone. However, a charter entity, usually a 501 (c) (3) nonprofit corporation, is authorized by the state legislature or an administrative agency designated by the legislature with the responsibility to create and monitor charter schools. The manner in which administrative agencies interact with charter schools varies from state to state. Most charters sponsors fall under one of three categories including (a) “grassroots organizations of parents, teachers and community members”; (b) “entrepreneurs”; or (c) “existing schools converting to charter status” (US Charter Schools, n.d. overview).

Types of Texas Charter Schools

The types of charter schools differ state to state, but the Texas Education Code authorizes four different types of charter schools in Texas. These include: (a) Home-Rule School District Charter authorized by TEC 12.011, (b) Campus or Campus Program Charter authorized by TEC 12.051 (c) Open-Enrollment Charter School as designated in TEC 12.101 and (d) College or University Charter School authorized by TEC 12.151.

Home Rule School District Charter

Home-rule schools essentially involve the conversion of a traditional public school district to a charter school district. This conversion does not affect their district boundaries or their ability to levy taxes and provides a little more freedom from regulations. As of 2007, no district took advantage of this opportunity (Texas Center for Educational Research, 2007, p. 3).

Campus Charter

The campus charters are schools within a traditional public school district that are either converted to charter schools or established as new charter schools. Again, the purpose is to provide greater freedom from governmental regulations and facilitate greater local control while remaining under the control of the school district. School campuses can be converted to charter schools within the district by approval from the board of trustees upon presentation of a petition from a majority of campus parents and teachers. Furthermore, the board of trustees cannot “arbitrarily” deny this petition (TEC 12.051-12.052). Although free from some rules governing traditional public schools, campus charters remain the legal responsibility of the sponsoring district. An estimated 56 campus charters operated in Texas in the 2006-2007 school year (Texas Center for Educational Research, 2008, p. ii).

Open-enrollment Charter

Open-enrollment charter schools are the most common type of charter school in Texas, with 314 campuses in operation during the 2006-2007 school year. Open-enrollment charter schools are sponsored by the State Board of Education, which grants a charter to an eligible entity, typically a non-profit organization (§12.101). These charters are accountable to the state similarly to traditional public schools. Open-enrollment charters have a governing board that provides oversight. The open-enrollment charter schools usually receive the most attention from the media.

University Charter

The final type of charter school which was added by the legislature in 2001 is a school sponsored by a college or university. These charters are allowed to operate in the county of the college or university which sponsors them, and the name of the school must include the name of

the sponsoring college or university. The college or university must design and implement innovative teaching methodology and must incorporate faculty from the college or university to oversee the educational program of the charter school (TEC §12.151-§12.156). Other than the requirements specified in TEC §12.151-§12.156, the college or university charter operates similarly to the open-enrollment charter. In the 2006-2007 school year there were 17 of these schools in operation (Texas Center for Educational Research, 2008, p. ii).

Funding

Charter schools are tuition-free public schools; the majority of their funding comes from the state, with a small portion flowing from a combination of federal and local funding. In Texas “more than 82% of charter school funding comes from the state; the rest comes from federal funds (14.5%), as well as grants and donations (3.3%)” (Texas Center for Education Research, 2005, 2006a, 2006b). Depending on individual state laws, funding for charter schools may come from the state directly or via the local school district. The funding conduit often depends on whether the state or the local school district is the authorizer of the charter. In Texas, open-enrollment charter schools receive their funding directly from the state.

Funding for start-up charters and facilities is one of the greatest obstacles facing charter schools. It is difficult for charters to compete with traditional public schools in terms of the quality of facilities because in many states, there are little or no start-up funds for obtaining charter school facilities and no ability to raise revenue through local taxes or bond elections. Charter schools are expected to compete with traditional public schools with significantly less operating funds and are forced to use a significant portion of their funds for leasing or purchasing facilities. “Because charter schools are not allotted funds specifically for the purchase, lease, or

maintenance of facilities, many charters must use money that would otherwise go to instructional costs” (Mitchell & Allen, 2005, p. 8).

While the funding discrepancy is different from state to state, the Center for Education Reform reports that nationally the average charter schools receive “21.25 percent less public money than conventional public schools” (Mitchell & Allen, 2005, p. 1). The same organization reports that data from 2005-2006 indicates that Texas charters received about 28% less funding than their traditional public school counterparts. The Texas Resource Center for Charter Schools also conducted a study specifically for Texas charter schools to compare their funding to that of traditional public schools and found that the funding discrepancy was even more significant.

Under an “apples to apples” comparison applying formulas to charters in the same manner in which they are applied to ISDs, Texas charter schools averaged \$1,825 less per weighted student per year than comparable ISDs in 2003-2004, equal to a 39% funding advantage for traditional school districts (Colbert, 2007, p. 1).

Due to some changes in the formula for charter schools, the expected difference in funding is projected to be about \$1,465 less per student per year during the 2007-2008 school year. Although an improvement over the 39% discrepancy, the funding gap relegates charter schools to a significant disadvantage to educate the same public school student.

Who Can Attend?

The answer to this question varies from state to state and charter to charter but typically follows the same premise. Charter schools “are tuition-free, non-sectarian, non-selective in student admissions, and non-discriminatory on the basis of race, religion or disability” (Bierlein & Mulholland, 1994, p. 3). However, in Texas if the charter is operated by the local education agency (LEA), then the local school district may give preference to students in its attendance zone.

Laws

One of the major premises for the creation and justification of charter schools is to allow greater academic freedom, less bureaucracy, and greater autonomy in exchange for outcomes.

Lori Mulholland and Louann Bierlein (1993) eloquently expressed this organizational concept of charters.

In exchange for accountability, the charter school may be freed from many (or all) of the district and state regulations that may prevent innovation. When the initial charter contract is up, if the school is meeting its student education outcomes, has not violated any laws, or grossly mismanaged its affairs or budget, it can be renewed. If a charter school fails to attain outcomes as specified in its charter contract, the schools goes out of business (p. 2).

Typically, charters are given more freedom from state regulations in exchange for academic achievement; however, charter school laws vary by state. Therefore, charters are held accountable at different levels.

Charter laws differ widely from state to state. Bierlein and Mulholland (1994) have studied charter school laws across the nation and categorized the laws as strong or weak (p. 4). Strong charter laws are those that give charters more freedom and autonomy from the regulations to encourage greater innovation and success. Weak laws are those which establish more of the same regulations and restrictions that encumber traditional public schools and/or do not provide adequate support for charters.

The Center for Education Reform has rated all states with charter laws by reviewing components of the law including number of schools allowed, eligible chartering authorities, eligible applicants, types of charter schools, governance, facilities assistance, reporting requirements, start-up funds, funding amount, certification and more (CER, 2008, Texas charter law). The 2008 report published by the Center of Education Reform (CER) rated eight out of forty states and District of Columbia with a grade of A, with Minnesota and the District of

Columbia earning the highest marks, and failed two states, Iowa and Mississippi with an F for the weakest charter legislation. Texas received a grade of C and ranked twenty-seventh out of the forty-one (Consoletti, 2008). Ten states currently do not have charter schools, including Alabama, Kentucky, Maine, Montana, Nebraska, North Dakota, South Dakota, Vermont, Washington and West Virginia (CER, n.d. faqs).

Pros and Cons of Charter Schools

Charter schools are at the center of much controversy. Emotions often run high as supporters and opponents voice their opinions about the positive or negative impact of charter schools. Supporters views charters as major positive reform agents in public education, while detractors contend charters will negatively affect the quality of public education. The purpose of this section of the research is to provide an objective analysis on the impact of charters schools on public education by presenting diverse viewpoints and providing research of charter schools at both the state and national level.

The AFT, a prominent teachers union whose past president was one of the originators of the charter school movement, now openly criticizes charter schools. In 2002, the AFT conducted an evaluation of charter schools titled, *Do Charter Schools Measure Up? The Charter School Experiment After 10 Years*. The report interpreted the 2003 NAEP (National Assessment of Educational Progress) results and summarized the views of proponents and opponents of the charter school movement as follows:

Advocates of charter school reform claim that these schools:

- Encourage innovation;
- Are more accountable than other public schools and focus more on results;
- Expand public school choice for all;

- Provide new increased professional opportunities for teachers;
- Require little or no additional money to implement or sustain; and
- Act as a catalyst for improvement of the public system (pg. 10).

Charter school supporters believe that the free market principles should apply to public schools. In the school choice model, parents become consumers who will choose the best school for their children. The dynamics of customer satisfaction and competition create an accountability system for both charter schools and traditional public schools. Since all public schools receive substantial state funding based on enrollment and attendance, failure to attract and maintain adequate enrollment will hurt the school financially. Therefore, both traditional public schools and charter schools have an external motivation to either attract and keep students or suffer the consequences of losing students and their funding.

As mentioned in the AFT report, charter school supporters believe in the innovation that charter schools bring to all public education. Freedom from some of the regulations of traditional public schools enable charters to be more creative and innovative. Successful charters can be replicated and unsuccessful charters can be discontinued. Charter schools serve as educational laboratories to test educational innovation. “One of the promises of charter schools is that they can serve as laboratories of innovation--they can be public education’s ‘R&D’ arm...if proven effective, can be transplanted back into the larger public education system.” (U.S. Department of Education [ED], 2004, pg. 2).

In AFT's (2002) report, charter school opponents criticize charter schools on the following grounds

- Skim the more affluent students and those with higher academic skills, leaving the public schools bereft of resources, yet still responsible for educating the high-risk, high-cost students;
- Are no more innovative than existing schools;
- Rely on low-paid, inexperienced labor;
- Exploit teachers and other education personnel;
- Reduce resources to other public schools that must educate the majority of children;
- Are no more accountable, maybe even less accountable, than other public schools;
- and may undermine the democratic nature of public schools in America (p. 10).

Opponents of charter schools not only disagree with the tenets of charter school supporters but emphasize that charters may damage public education and the majority of students they serve by attracting the best students from traditional public schools and leaving at-risk and low-performing students to suffer in low-performing schools. Ultimately, opponents contend that charter schools are not living up to their promise after more than ten years of operation. In essence, charters have over-promised and under-delivered based on the results.

Jeffrey Henig, in his article for *Educational Leadership* (2009), "The Specturm of Education Research," wrote about the biases of scientific research based on the perspective of the researcher and used charter schools as his main example. He cited the report by the AFT and the data from the 2003 NAEP test. After the AFT released its study, the *New York Times* ran an article with the headline "Charter Schools Trail in Results, U.S. Data Reveals" (Schemo, 2004, p.A1). The Center for Educational Reform, a pro-charter organization, followed up with an ad in

the New York Times dismissing the validity of the analysis by the AFT and lack of “journalistic responsibility” by the *New York Times* (CER, 2004). Finding objective studies on charter schools can often be difficult since many of the studies are funded by special interest groups with their own agenda. Jeffrey Henig (2009) further reinforces this idea:

Advocacy groups appear anxious to enlist social science evidence and researchers to add legitimacy to their causes... On politically contentious policy questions, opposing cliques are ready and able to muster their own stable of researchers and findings to buttress their claims and challenge those cited by the other side (p. 7).

Therefore, a reader may conclude the slant of the research without ever reading the study or article simply by knowing who funded the project. The same data can often be interpreted to support opposing claims pending the predisposed views of the researcher interpreting the data or the group that funded the study.

Therefore, due to the contentious debate regarding charter schools and the resulting research which may be predisposed to support one side or the other, the data presented here will attempt to draw upon non-politicized research with the author and/or funders of the study taken into consideration. This research will primarily include state or federally funded studies. Although there may be no easy answers to determine the success or failure of charter schools, the following research will attempt to provide the reader with a fair and objective viewpoint.

National Charter Schools

Characteristics

In 2008-2009, there were 4,578 operating charter schools serving 1,407,421 students in forty states and the District of Columbia. Out of the states that have charter schools, California has the most schools in operation with 802 and the most students with 316,468. Conversely, Mississippi has the fewest number of charter schools with 1 serving 367 students, and Wyoming has the fewest number of students with 244 housed in 3 schools (CER, 2008). Free from some of

the regulations and red tape of traditional public schools, charter schools are somewhat distinctive with respect to their mission and focus. Although charter schools often share similar goals of increasing student achievement and college readiness, their methodology, operations, and cultures may be as different as the number of individual charter schools in existence.

Student enrollment per charter school is relatively small in comparison to traditional public school enrollment. Many start-up charter schools have less than 100 students. However, as a charter school matures, enrollment tends to increase. The national average enrollment per charter school has followed this trend of increased enrollment per campus. Even with the increase in average enrollment over time, charter school campuses are still significantly smaller than their traditional counterparts. “In fact, traditional public schools were nearly three times as large as charter schools in 1999-2000—458 students in traditional public schools compared with 169 students in charter schools” (Finnigan et al., 2004, p. 20).

Charter schools are more likely to serve in large metropolitan cities than in suburban or rural areas. Over half of all charter schools in the nation are located in the central metropolitan areas. Since minority populations tend to be concentrated in urban areas, these statistics would also correlate with the fact that charter schools serve a higher percentage of minority students than traditional public schools. Furthermore, recent trends indicate that the percentage of minority students to white students is further widening within charter schools.

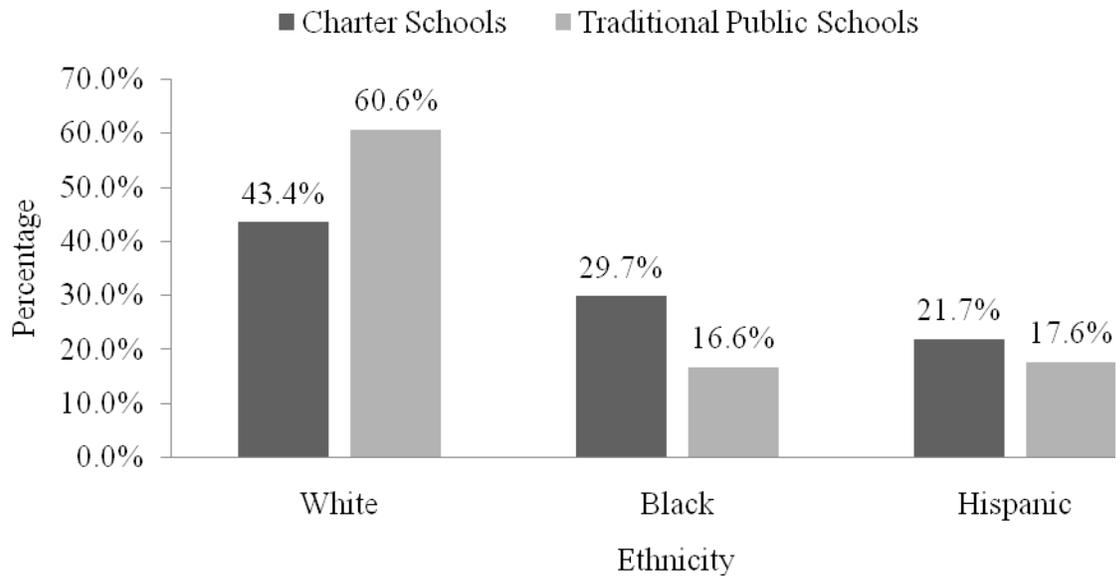


Figure 2.1. Student ethnicity: Charter compared to traditional public 2003-2004. From Characteristics of Schools, Districts, Teachers, Principals, and School Libraries in the United States 2003-04: Schools and Staffing Survey by NCES, (2007), p. 15.

Charter schools as compared to traditional public schools serve a higher percentage of socioeconomically disadvantaged students eligible for free and reduced lunch. The percentage of students who qualify has steadily increased from 39% in 1998-1999 to 48.6% in 2003-2004. Traditional public schools serve a greater percentage of special education students, while the percentage of students with an IEP has increased in charter schools from 8% in 1998-1999 (Finnigan et al., 2004, p. 25) to 10.8% in 2003-2004 (Strizek et al., 2007, pp. 17 & 19). The growth of the special education student population within charter schools may be due to the development of more effective identification and diagnostic procedures for recognizing students with special needs within charter schools.

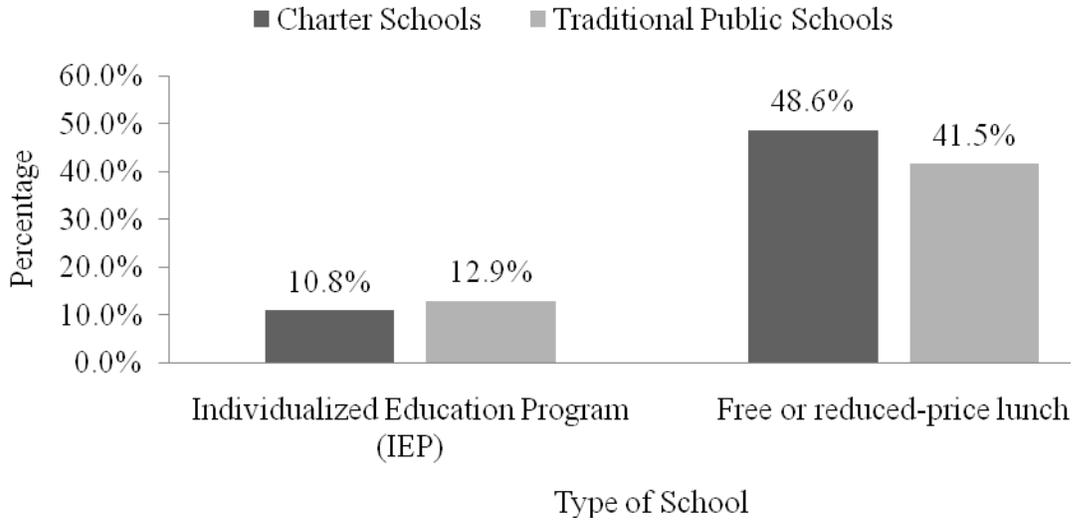


Figure 2.2. Student demographics: Charter schools compared to traditional public schools 2003-2004. From *Characteristics of Schools, Districts, Teachers, Principals, and School Libraries in the United States 2003-04: Schools and Staffing Survey* by NCES, (2007), pp. 17 & 19.

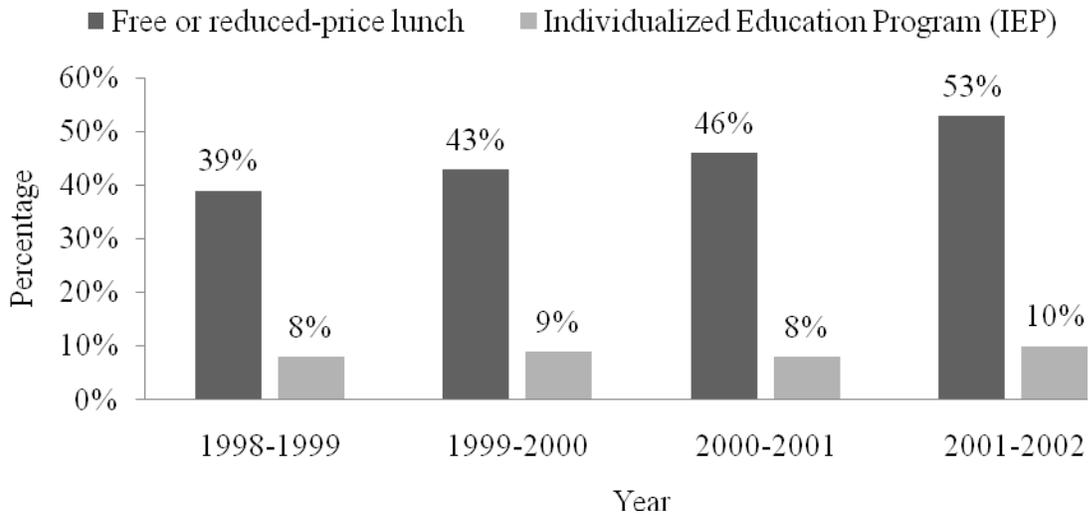


Figure 2.3. Charter school ECON and IEP student percentages from 1998-1999 to 2001-2002. From *Evaluation of Public Charter Schools Program: Final Report* by Finnigan et al. (2004) p. 25.

Teachers

Part of the purpose of charter schools is to recruit new types of teachers into the field of education. Therefore, it is no surprise that charter schools do not have as many certified teachers as traditional public schools. In 1999-2000, traditional public school teachers were at 92% full

certification compared to 79% of charter school teachers. “Teachers in charter schools were nearly three times more likely to have emergency credentials compared with teachers in traditional public schools (21 percent versus 8 percent)” (Finnigan et al., 2004, p. 27).

Nationally, there is a greater percentage of white teachers than all other ethnicities combined in both traditional public and charter schools. However, charter schools have shown a decline in the number of white teachers and an increase in the number of African American teachers. From 1999-2000 to 2001-2002, the percentage of white teachers has shrunk from 73% to 63% and the number of African American teachers has increased from 16% to about 24%.

This trend may be due to the number of charter schools located in urban areas and correlates to the higher percentage of minority students in charter schools as compared to traditional public schools (Finnigan et al., 2004, pp. 26-27).

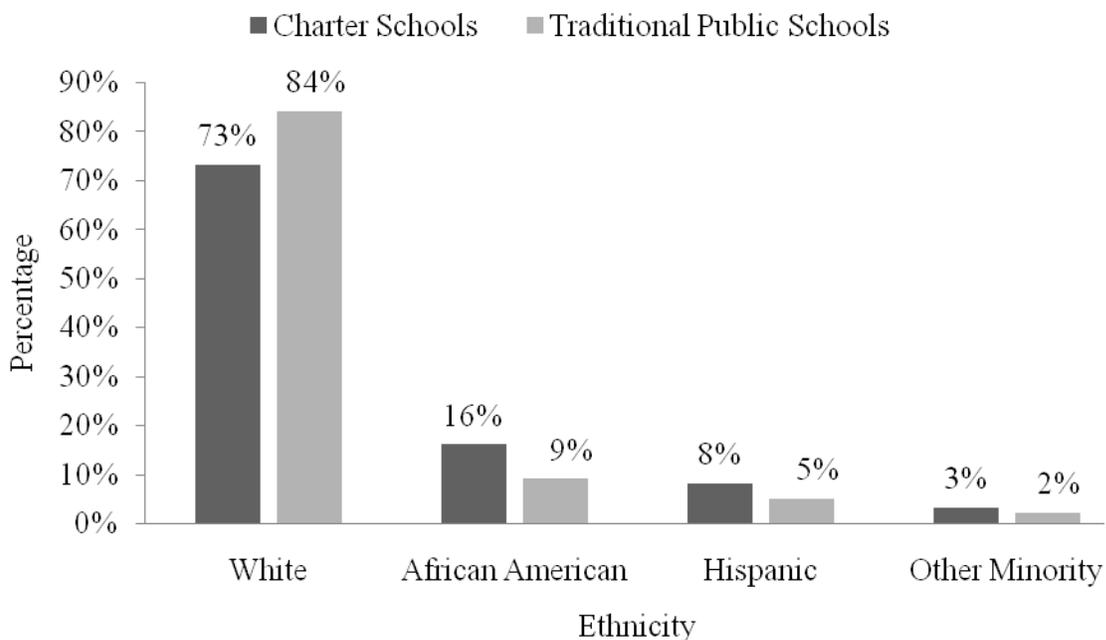


Figure 2.4. Teacher characteristics traditional public compared to charter schools 1999-2000. From *Evaluation of public charter schools program: Final report* by Finnigan et al. (2004) p. 27.

NAEP 2003 Pilot Study

“The Nation’s Report Card, the National Assessment of Educational Progress (NAEP), is a nationally representative continuing assessment of what America’s students know and can do in various subject areas” (ED, 2004, p. i). The 2003 study involved the first NAEP test administered to charter schools with 150 schools chosen, half of the students randomly selected to take the math test and half to take the reading test. (ED, 2004, p. 3). The test was a snapshot in time that measures student performance. Since this assessment was the first test administration implemented in charter schools, there were no previous results with which to compare it at that time (CER, 2004, one set).

Accurate interpretation of data requires that the school type and multiple data factors be taken into consideration. One of the criticisms of the NAEP report is that the study did not use multiple family characteristics simultaneously, nor did it consider the school type due to limited information (CER, 2004, limited). However, the NAEP does provide some demographic information including ethnicity, SES, gender and location of the school. Results of the study indicated that charter schools educate a statistically higher number of black students than traditional public schools and that a statistically higher number of charter schools were located in the central city. The traditional public schools exhibited a statistically higher number of special education students, white students and schools located in non-central city. “Since far more charter schools than other public schools are located in central cities, and there are striking differences in their demographic makeup, it is more fair to compare the performance of students that share a common characteristic” (ED, 2004, p. 2). This analysis supports the variations of charter schools and their specific missions; an example of this would be at-risk charters.

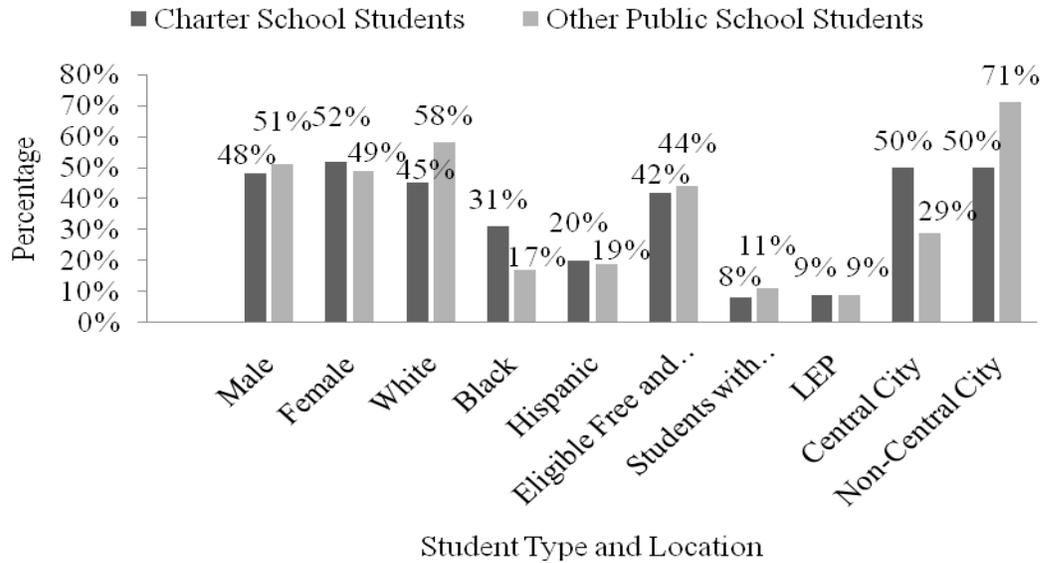


Figure 2.5. 4th Grade NAEP student characteristics. From *The Nation's Report Card: America's Charter Schools: Results from the NAEP 2003 Pilot Study* by NCES (2004), p. 2. 4th Grade Reading Results

The results of the fourth grade NAEP reading exams indicated little difference in academic performance between charter schools and traditional public schools. Traditional public schools had a slight edge on the results overall but the differences were not statistically significant. There was no statistical difference when ethnicity was considered, although traditional public schools had a slight performance edge with black students and charter schools had a slight edge with Hispanic students. Traditional public schools demonstrated statistically significant positive results for female and low SES students. These results comprised a positive demonstration of charter school performance when “on average, charter schools have higher proportions of students from groups that typically perform lower on NAEP than other public schools have” (ED, 2004, p. 1).

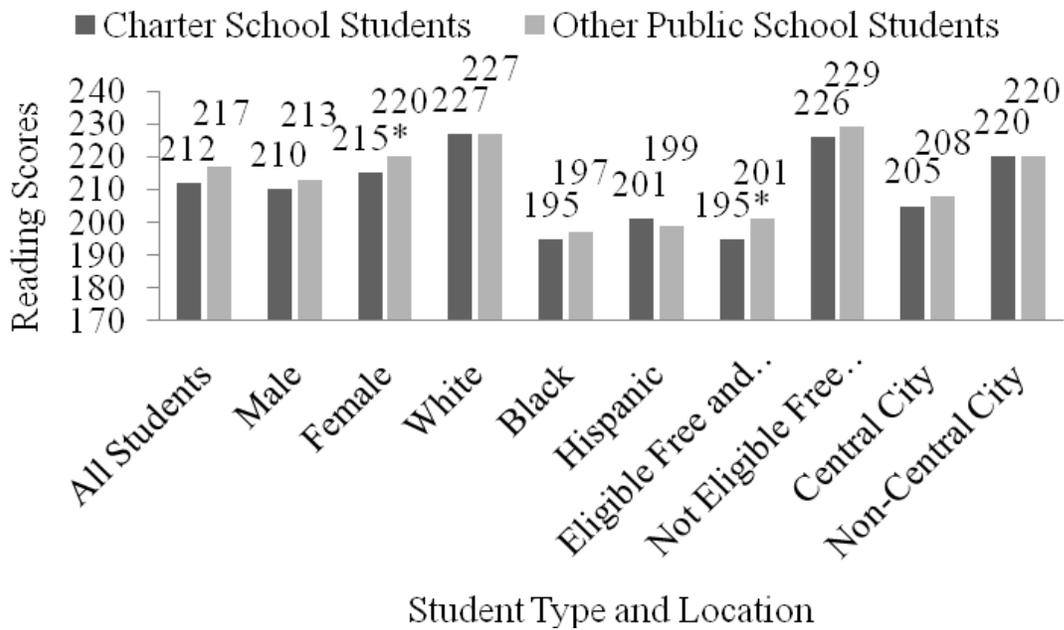


Figure 2.6. 4th Grade NAEP reading results. From *The Nation's Report Card: America's Charter Schools: Results from the NAEP 2003 Pilot Study* by NCES (2004), p. 4.

4th Grade Math Results

“The national results showed a lower average mathematics score overall for fourth-grade students in charter schools. This was true for both male and female students. However, there were no measurable differences when comparisons were made for fourth-graders with similar racial/ethnic backgrounds” (ED, 2004, p. 7). These are significant results for charter schools when after only a few years in operation charter schools are competing with other public schools in academic performance and standards of accountability.

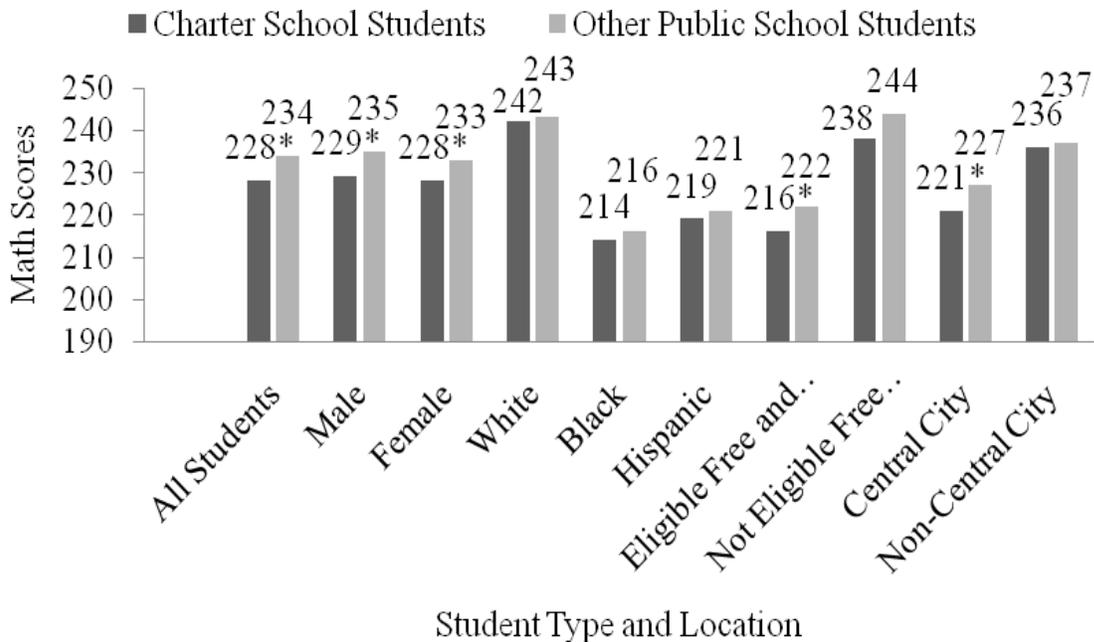


Figure 2.7. 4th Grade NAEP Math Results. From *The Nation's Report Card: America's Charter Schools: Results from the NAEP 2003 Pilot Study* by NCES (2004), p. 7.

Hierarchical Linear Modeling

“The nature of the NAEP survey allowed for only a snapshot of America’s charter schools. Given the considerable variation in student demographic populations, a clear picture for comparison is not easily discernable. For example, for students from the same racial/ethnic backgrounds, reading and mathematics performance in charter schools did not differ from that in other public schools” (ED, 2004, p. 10). Therefore, the NAEP along with the National Center for Education Statistics used the data from the 2003 tests but subjected it to a “ ‘combined analysis’ in which hierarchical linear models (HLMs) were employed to examine differences between the two types of schools when multiple student and/or school characteristics were taken into account” (ED, 2006, p. iii). The HLM analysis allowed for comparisons between schools with similar characteristics, thereby creating a more fair evaluation. In this case, the 2003 NAEP fourth grade data was derived from 61 charters located in central city locations serving a high-

minority population. However, even with the additional analysis the results were similar. The reading results showed no statistically significant difference between charter schools and traditional public schools. Similarly, math results were statistically significantly better for traditional public schools than charter schools (ED, 2006, p. iv).

Summary

The statistical national assessment evidence is still inconclusive. Although the charter school research has been heavily politicized, a balanced approach is preferable. As one study summarized, “charter schools are neither the unqualified failure that detractors claim, nor that there is something inherent in the independent structure of charter school organization that promotes greater student achievement, as choice enthusiasts would have us believe” (Lubienski & Lubienski, 2006, p. 36). Charter schools are still considered an experiment in which some will succeed while others fail. Furthermore, the research of charter schools must be interpreted within the context of its type, programs and populations served. More research is needed which includes assessment with multiple factors and other research indicators for the evaluation and improvement of charter schools, as well as the establishment of criteria for the efficient closing of ineffective charter schools.

Texas Charter Schools

The focus of the literature review provides a complete overview of charter schools, including the origin, early history, purpose and intent of their existence. The literature highlights the pros and cons of charter schools both in theory and practice as expressed by both proponents and opponents of charter schools. Finally, the literature analyzed the establishment and effectiveness of the charter school movement on a national level. However, since the focus of this study is on Texas charter schools which have been in existence for the past 13 years, it

would be a disservice not to provide an overview of charter schools after their first ten years. Therefore, the final section of the review of literature primarily uses the Texas Charter School 2006-2007 Evaluation in order to glean insight into the successes and/or failures of charter schools over their years of operation in Texas.

The Texas Charter School Evaluation is a study of Texas charter schools as mandated by Texas Education Code Chapter 12.118, which requires the Commissioner of Education to appoint an “impartial organization” (TEC 12.118a) to conduct an annual review of charter schools. This review was done by the Texas Center for Educational Research, a fifteen-member board that governs the research center and includes appointees from the “Texas Association of School Boards, Texas Association of School Administrators, and Texas State Board of Education” (Brinson, Caranikas-Walker, Maloney, Reyna, & Sheehan, 2008, credits).

The State of Texas allows for various types of charter schools, including campus charters, which are operated under the auspices of an independent school district, university charters and open-enrollment charters. Since open-enrollment charter schools comprise the largest class of charter schools with 314 campuses in operation during the 2006-2007 school year and are not overseen by a traditional school district, they will be the primary focus of this section of the literature review (Brinson et al., 2008, p. 6). The study distinguishes open-enrollment charter schools from campus charter schools and includes university charters with open-enrollment charters. This separation was not possible on the national level since different states have their own unique charter laws and charter schools.

Table 2.1

Type of Texas Charter School by Level

Campus Types	Open Enrollment Charter Schools	University Charter Schools	Campus Charter Schools
Elementary	109	3	30
Middle	28	0	14
Senior	84	4	11
All levels	93	11	1
Total	314	18	56

Note. Source from *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), p. 7.

In order to fairly hold accountable all public schools, an alternate education accountability (AEA) category was created for those schools that primarily serve at-risk students including “students at risk of dropping out; recovered dropouts; pregnant or parenting students; adjudicated students; students with severe discipline problems; or expelled students” (TEA, 2008, p. 73). Charter schools have a disproportionately high number of schools which fall under this accountability rating. “In 2006-2007, 33% of open-enrollment charter school students were enrolled in AEA programs compared with one-half of 1% of traditional district school students” (Brinson et al., 2008, p. v). The TEA has recently scrutinized the number of charter schools within this category by requiring them to have a higher number of at-risk students. “In 2006, the TEA established a minimum of 65% at-risk student enrollment in order for a school to qualify as an AEA campus. The requirement increased to 70% in 2007 and will move to 75% in 2008” (Brinson et al., 2008, p. 23). A possible explanation for the high number of AEA charter schools is found in the 75% rule that allowed an unlimited number of charter schools to be created with

at least 75% at-risk students. During the three years the 75% rule was in effect, 142 of these campuses were opened.

Table 2.2

Number of Standard AP & Alternative AP Charter Schools

Campuses/Enrollment	Standard AP	Alternative Education AP	All Open-Enrolment Charter Campuses	Texas Public Schools
Number of campuses	187	145	332	8,061
Average Enrollment	290	182	243	568
Total Students	54,197	26,432	80,629	4,576,933

Note. Source from *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), p. 30.

Charter schools serving primarily at-risk students are very important. Many charter schools have expressed their primary purpose as an educational alternative for reaching those students who have been academically unsuccessful in traditional public schools as determined by standardized test scores. For example, Dallas Can Academy, one of the older charter schools serving the Dallas-Fort Worth metroplex, has declared its mission is “to provide a second chance for at-risk youth and their families to achieve economic independence and hope for a better life through relationship-based education and training” (Texas Can, 2006, mission). This school has been very effective in facilitating and improving graduation rates for at-risk students in danger of dropping out of school. However, for the purpose of this section, the data on charter schools and traditional public schools will primarily focus on schools under the standard accountability procedures (standard AP). This perspective will allow for a more accurate comparison between traditional public schools and open-enrollment charter schools.

Characteristics

Open-enrollment charter schools opened in Texas in 1996-97 with 17 schools and 2,498 students. In 2006-07, the number of open-enrollment charter schools multiplied to 191 charters, 332 campuses and 80,629 students. Even with this significant growth, charter schools represent less than 2% of the 4.5 million public school students in the State of Texas, which is roughly equivalent to the size of Austin ISD (Brinson et al., 2008, pp. 28-29).

Table 2.3

Enrollment per Campus & 75% Rule Charter Schools

School Year	Total Open-Enrollment Charter Schools in Operation	Number of 75% Rule Charter Schools	Total Number of Students Enrolled	Average per Campus Enrollment
1996-97	17	0	2,498	147
1997-98	19	0	4,135	217
1998-99	89	45	17,616	198
1999-00	146	46	25,687	156
2000-01	160	51	37,696	188
2001-02	180	0	46,304	192
2002-03	185	0	53,156	204
2003-04	190	0	60,748	222
2004-05	192	0	66,073	223
2005-06	194	0	70,861	226
2006-07	191	0	80,629	243

Note. Source from *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), p. 28.

The majority of the new charter school growth occurred between 1998 and 2001, when open-enrollment charters grew from 19 in the 1997-1998 school year to 180 in the 2001-2002

school year. However, after 2002 growth in the number of new open-enrollment charter schools has slowed down significantly; from 2001 to 2006, only 11 new charter schools opened. These new charters opened after the cap of 20 was lifted and the 75% rule was authorized. Shoddy setup of new charters schools resulted in a move by the SBOE to establish a more stringent authorization process. Moreover, new legislation revoked the 75 Percent Rule and placed a new cap of 215 open-enrollment charter schools, which has yet to be reached as of the 2006-2007 school year (Brinson et al., 2008, p. 20). Despite the limited growth of charter schools since 2001, 91 new campuses were added to the existing charter schools and the average number of campuses per charter went from 1.1 in 1996 to 1.7 in 2006 (p. 27).

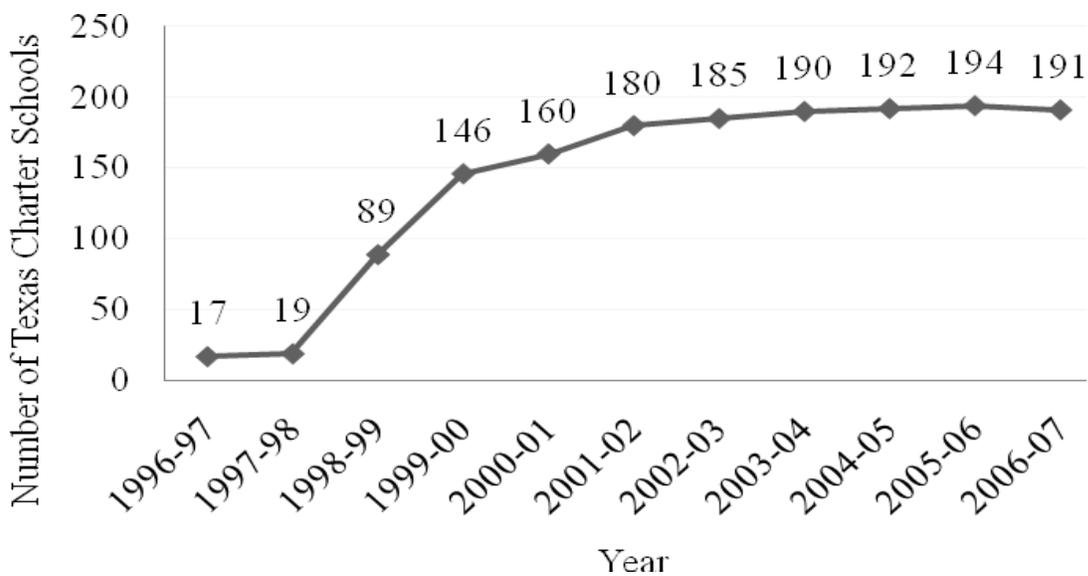


Figure 2.8. Number of Texas charter schools by academic school year. From *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), p. 28.
Enrollment

The per-campus enrollment of open-enrollment charter schools has continued to increase from 147 in 1996 to 243 in 2006 but is still smaller than the average traditional public school with 568 students per campus. Since it is important to distinguish between standard AP and

AEA open-enrollment charter schools, the table below displays the differences in enrollment between the two types of open-enrollment charter schools. A significant contrast between these two types of schools is their enrollment pattern. Standard AP schools are more heavily concentrated in Pre-K through 8th grade and AEA schools are mostly comprised of high school students. A larger at-risk population and a higher concentration of students in upper grade levels account for this discrepancy. Standard AP enrollment represents two-thirds of all open-enrollment charter students.

Table 2.4

Enrollment per Grade Level by Assessment Type

Grade Level	Standard AP	Alternative Education AP	All Open-Enrollment Charter Schools	Public Schools Statewide
Early Childhood	21	16	37	12,677
Pre-K	7,149	1,704	8,853	186,865
K	5,537	444	5,981	352,632
1	5,281	419	5,700	372,267
2	4,637	373	5,010	353,570
3	4,203	389	4,592	346,088
4	3,749	382	4,131	340,362
5	4,161	396	4,557	337,035
6	4,688	696	5,384	334,381
7	3,943	929	4,872	331,449
8	3,231	1,324	4,555	338,263
9	2,577	6,177	8,754	396,028

(table continues)

Table 2.4 (continued).

Grade Level	Standard AP	Alternative Education AP	All Open-Enrollment Charter Schools	Public Schools Statewide
10	1,934	4,870	6,804	326,122
11	1,857	4,875	6,732	289,688
12	1,229	3,438	4,667	259,506
Total	54,197	26,432	80,629	4,576,933

Note. Source from *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), p. 31.

As of the 2006-07 school year, 260 Texas open-enrollment charters have been awarded.

Thirteen of these have been revoked, rescinded, or denied renewal. The rates for revoked charter schools, rescinded charter schools, and non-renewals are 2.3%, .5% and 1.5%, respectively.

Another 43 charter schools either returned their charters to the state (25 charter schools), allowed their charter to expire (3 charter schools), or merged with another charter (15 charter schools) (Brinson et al., 2008, p. 29).

Staff

Texas open-enrollment charter schools differ from traditional public schools significantly in their respective staffs. These differences include salary, number of years experience, tenure, and ethnicity. Standard AP open-enrollment charter schools are more likely to have minority teachers, with 50.3% minority compared to 30.1% minority in traditional public schools (Brinson et al., 2008, p. 38). The number of years experience for teachers and administrators in standard AP open-enrollment charter schools is about half that of their counterparts at traditional public schools, and their turnover rate is nearly three times more (p. 37). Even though open-enrollment charter staffs have received a higher percentage salary increase over the past few

years, their salaries trail behind traditional public schools by 12% for central office administrators, 18% campus administrators and 20% for teachers (pp. 34 & 36).

Certification and higher education levels of administrators are other important aspects for comparison. Standard AP open-enrollment charter schools lag behind traditional public schools in principal certification, with 36.5% of charter school principals certified as compared to 98.6% of principals at traditional public schools. The same discrepancy holds true with higher education, with 91% of traditional public school principals having a Master's degree compared to 63.5% of standard AP open-enrollment charter school principals. However, it is interesting to note that standard AP open-enrollment charter schools have 3.2% more principals with doctorate degrees (Brinson et al., 2008, pp. 70-71).

Principal and Parent Survey

Charter schools are schools of choice; i.e., they receive their entire enrollment from parents who opt to enroll their children in a particular charter school. All Texas students have the ability to attend the school district in which they reside. Therefore, a staff and parental evaluation of charter schools is significant. A survey of principals and parents of charter schools and traditional public schools, which was conducted as part of the Charter School Evaluation, provides useful data to enhance the assessment of impact of open-enrollment charter schools in Texas.

Safety is an important issue to parents when selecting a school for their child. A greater percentage of traditional public school principals indicated disciplinary problems in all designated areas than open-enrollment charter school principals. Tardiness and absenteeism were cited as the worst problem areas of discipline by principals in both open-enrollment charter schools and traditional public schools. Cutting class, physical conflicts and alcohol/drug abuse

were cited as problem areas by a significantly higher percentage of principals at traditional public schools as compared to open-enrollment charter schools.

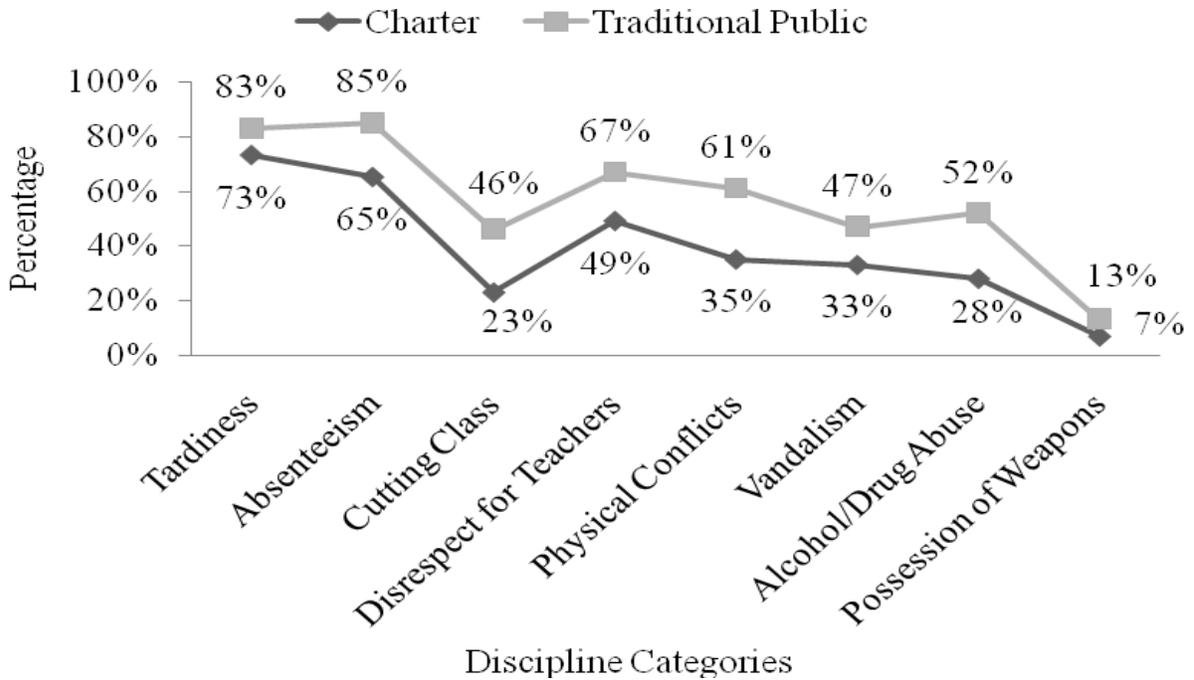


Figure 2.9. Student discipline principal survey. From *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), pp. 79-80.

Parents of both open-enrollment charter school students and traditional public school students share similar emphasis in the selection of a school for their children. Parents of children at charter and traditional public schools listed good teachers, quality educational programs and academic reputation as the most important factors in selecting a school. A higher percentage of open-enrollment charter school parents reported the school’s ability to serve special needs students, an emphasis on moral values, approach to discipline and a smaller class size as important factors. A greater percentage of parents of students at traditional public schools indicated that dissatisfaction with a previous school, poor performance at the previous school and

convenient location were important factors in selecting a school for their children. (Brinson et al., 2008, p. 100).

The parental survey of school attributes confirmed several implications from the previous survey. Parents of open-enrollment charter school students indicated that small class sizes and individual attention for the student were the highest factors of parental satisfaction as compared to the traditional public school. Traditional public schools scored much higher in parent satisfaction with extracurricular activities, support services, facilities, and staff turnover. The latter may be an indication of the funding discrepancy, years of operation and school size between open-enrollment charter schools and traditional public schools.

Based on school waiting lists, open-enrollment charter schools are popular with parents. Unlike traditional public schools, which must admit all students residing in their attendance zone, open-enrollment charter schools may cap their enrollment and often carry a waiting list of students. “Standard accountability open-enrollment charter schools were most likely to be oversubscribed (14%) and, on average, about 240 students were denied placement in these schools in 2006-07” (Brinson et al., 2008, p. 77). This statistic becomes more significant because the average enrollment in open-enrollment charter schools is 290 students (p. 30). Therefore, the number of students on waiting lists nearly match the total enrollment in standard AP open-enrollment charter schools.

Academics

Although it is important to consider many factors when evaluating the effectiveness of schools, academic achievement is the primary indicator of the success of an educational institution. With respect to academic ratings, standard AP traditional public schools tended to perform better academically than standard AP open-enrollment charter schools. Standard AP

traditional public schools had 12% more campuses receive the “recognized” ranking from the state, and 20% less earned “academically unacceptable” status as compared to standard AP open-enrollment charter schools.

Table 2.5

Campus Rating 2004-2007

	Rating	2004	2005	2006	2007
Standard AP OE-Charter Schools	Exemplary	6%	2%	9%	9%
	Recognized	16%	15%	24%	22%
	Academically Acceptable	55%	60%	46%	47%
	Academically unacceptable	23%	23%	21%	23%

Standard AP Traditional Public Schools	Exemplary	8%	5%	8%	9%
	Recognized	38%	28%	42%	34%
	Academically Acceptable	53%	64%	46%	53%
	Academically unacceptable	2%	3%	4%	3%

Note. Source from *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), p. 132.

Comparing standard AP traditional public schools with their charter counterparts shows a much closer relationship in results between the two when the data is broken down by core subject area rather than rating. The traditional public school has a slight edge in test scores on all 2007 TAKS test subject areas, ranging from a 2% greater passing rate in English language arts (ELA) to an 8% passing rate advantage in science and a 3% edge in all core areas (Brinson et al., 2008, p. 136). However, the statistics listed and illustrated below do not account for student characteristics such as ethnicity and SES.

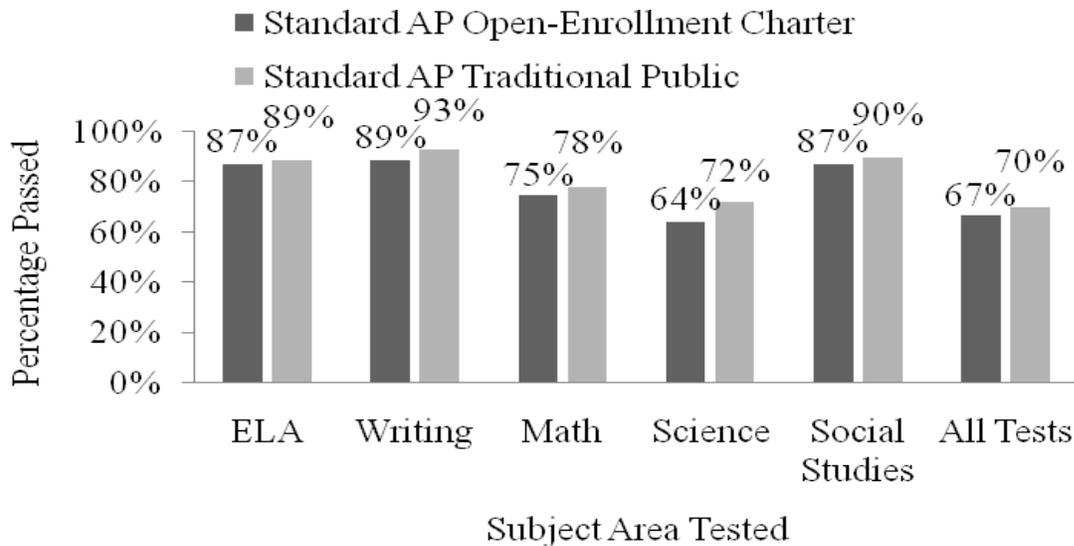


Figure 2.10. TAKS passing rate standard ap open-enrollment charter vs. traditional public. From *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), p. 136.

Another comparison with the TAKS results can be made by grade level comparison. Standard AP open-enrollment charter schools have a slight edge in academic performance over standard AP traditional public schools in the middle level grades (6, 7, 8, and 9). Conversely, traditional public schools have a more significant advantage in the elementary grades and 10th & 11th grade tests results. Again, these results do not reflect student subpopulations (Brinson et al., 2008, p. 138).

“While absolute performance on the criterion-referenced TAKS assessment is one important indicator of student mastery of the state’s curriculum it is also important to look at the year to year improvement as a way to determine whether students and schools are making progress in raising achievement” (Brinson et al., 2008, p. 146). Students attending a standard AP open-enrollment charter school for three consecutive years improved their passing rate by greater than 5% in both reading/ELA and 10% in math. The commended performance rate likewise increased in both reading/ELA and math by 7% and 5%, respectively (p. 147). In fact, students

attending a standard AP open-enrollment charter school for three consecutive years received nearly identical passing rates in math and reading/ELA as those attending standard AP traditional public schools.

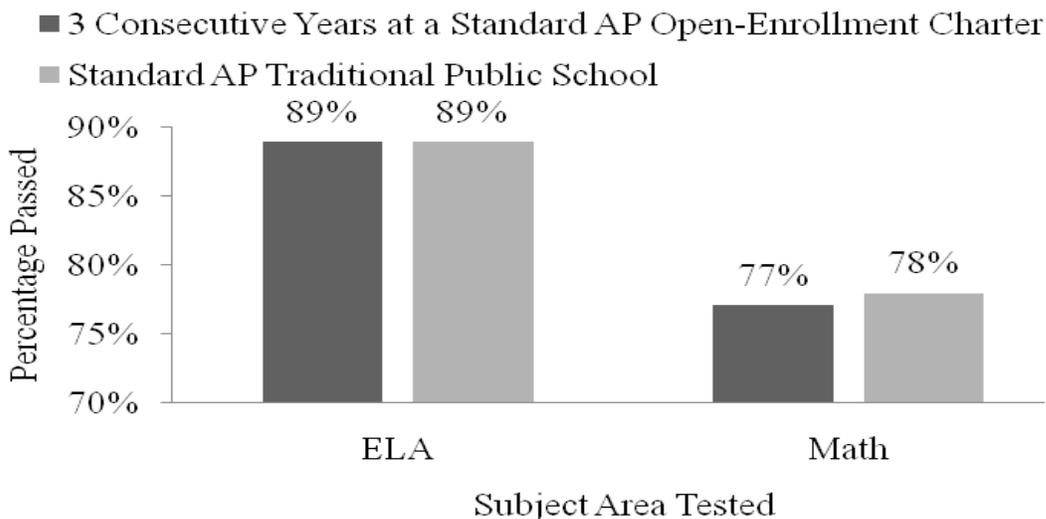


Figure 2.11. 2007 TAKS passing rates after three consecutive years. From *Texas charter schools: 2006-2007 evaluation* by Brinson et al. (2008), pp. 157-158.

A positive trend continues with those students who attend an open-enrollment charter school for four consecutive years (2004-2007). These students had the highest reading/ELA and math passing rates and demonstrated the greatest gains on the 2007 TAKS tests. Furthermore, there was positive “monotonic (one direction or order) relationship between” continuous annual enrollment in a charter school and 2006 and 2007 TAKS passing rates (Brinson et al., 2008, p. 148). These are promising results for charter schools and further demonstrate the need for more research on charter schools.

Summary

The above statistics provide important data; however, it is hard to obtain an accurate picture of charter schools from this data alone. There are several unique components of charter schools that must be considered within the context of open-enrollment charter schools. First, this

data is taken from charter schools after ten years of existence as a movement, and most of the charter schools are much younger. Second, as demonstrated earlier, open-enrollment charter school enrollment is much smaller than the state average enrollment at traditional public schools. Smaller school districts typically cannot compete with larger district salaries, facilities, extra-curricular activities, etc. Finally, open-enrollment charter schools serve a higher percentage of minority students, mobile students, and socioeconomically disadvantaged students and are located primarily in urban areas.

Because charter schools offer different kinds of programs and attract different kinds of students than traditional district schools, it is difficult to make fair comparisons between charter and traditional district schools' student achievement outcomes. Student achievement is affected by many factors, including parental education and income levels, neighborhood characteristics, and students' academic talents and prior levels of education, that are not necessarily related to the quality of a school's educational program. Comparisons of average test scores across charter and traditional district schools that do not account for student differences may produce biased estimates of school outcomes that penalize or reward charter schools for the types of students they serve (Brinson et al., 2008, p. 4).

When taken in context, the data may indicate a much different story, but as charter schools continue, the above indicators should be re-examined. If charter schools are to continue, they must produce results as good as or better than the traditional public school for the same types of students. Furthermore, they should also be a catalyst for improvement in all areas of education through marketplace competition. Otherwise, the question has to be asked if charter schools should continue to receive state and federal funds. More research is needed on Texas charter schools. The research portion of this study will examine the effectiveness of Texas open-enrollment charter schools and analyze the differences between effective and ineffective charter schools.

CHAPTER 3

METHODOLOGY

Introduction

As discussed in chapter 2 of the literature review, there is no clear determination of the successes or failures of charter schools as a whole. However, it is clear that there are some charter schools which have shown much promise through their achievements in a relatively short period of existence. Conversely, there are many charters which have failed to achieve even minimum academic and professional standards. Therefore, this study compares state accountability ratings for standard accountability procedures (AP) open-enrollment charter campuses versus standard AP traditional public campuses. In addition, this study determines if charter schools are performing better, worse or about the same as the literature review indicates. Furthermore, the research determines if there are correlations between the accountability ratings and other campus predictors within charter and traditional public campuses. This research is valuable because it highlights those predictors which correlate to accountability ratings and may be beneficial in providing predictors of higher accountability ratings and differences in these indicators between charter and traditional public campuses.

Chapter 3 therefore outlines the methods and research design to determine which, if any, predictors may or may not correlate to accountability ratings. This chapter includes the research questions and null hypothesis, data collection, research variables, and statistical analysis. Providing a detailed description of the methodologies and research design will benefit and facilitate further research and replication.

Research Questions and Hypotheses

1. Is there a statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses?

H₁ There is no statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses.

2. Are there any statistically significant correlations between chosen predictor variables (average student/teacher ratio, percentage expenditure on instruction, average teacher experience, average teacher tenure, average teacher salary, average administrator salary, percentage of at-risk students, percentage of limited English proficiency (LEP) students, percentage of economically disadvantaged students, percentage of White students, percentage of Black students, percentage of Hispanic students) and accountability ratings for Texas standard AP open-enrollment charter campuses?

H₂ There are no correlations between the chosen predictor variables and accountability ratings for Texas standard AP open-enrollment charter campuses.

3. Are there any statistically significant correlations between chosen predictor variables (average student/teacher ratio, percentage expenditure on instruction, average teacher experience, average teacher tenure, average teacher salary, average administrator salary, percentage of at-risk students, percentage of LEP students, percentage of economically disadvantaged students, percentage of White students, percentage of Black students, percentage of Hispanic students) and accountability ratings for Texas standard AP traditional public school campuses?

H₃ There are no correlations between the chosen predictor variables and accountability ratings for Texas standard AP traditional public school campuses.

Data Collected

Data included in this research was obtained from the Academic Excellence Indicator System (AEIS) which can be downloaded from the Texas Education Agency (TEA) website. The AEIS contains data from all Texas public school districts and campuses as they report to TEA through PEIMS (Public Education Information Management System). Additional data was collected through other entities including testing companies and state agencies. The majority of the data is self-reported annually during multiple submissions periods determined by TEA. Most demographic data is based on a snapshot date, designated as the last Friday of October for the first PEIMS submission. The data collected by TEA is significant because it provides the most extensive data collection of any state education agency and includes valuable information for research projects and state reporting. Although the data is self-reported and therefore may contain some errors, the magnitude of data from over 1000 school districts and the effectiveness of software analysis cause the impact of any submission errors to be negligible.

The AEIS data collected for this research is from the 2007-2008 school year. This data represents over 8,061 traditional and charter campuses and 4,576,933 students (TEA, 2007). The information collected includes but is not limited to: “a wide range of information on the performance of students in each school and district in Texas every year. These reports also provide extensive information on staff, finances, programs, and demographics for each school and district” (TEA, 2009, ¶ 1). The AEIS data was first downloaded from the TEA website into a spreadsheet software file and subsequently aggregated from multiple downloads. Variables not used in the study were removed before the data was imported to SPSS, a statistical software commonly chosen for its ability to handle graduate-level research analyses and for its user friendliness.

Charter campuses which were not open-enrollment and university charters were removed, since the purpose of this study was to focus on open-enrollment charter schools. Furthermore, all campuses which were not standard AP were removed before importation into SPSS.

Standard AP campuses include the vast majority of campuses in Texas. Alternative education campuses (AEC) are defined as those schools which use the alternative education accountability rating (AEA) system. These schools primarily serve at-risk students and include but are not limited to “residential programs and facilities operated under contract with the Texas Youth Commission (TYC), students in detention centers and correctional facilities that are registered with the Texas Juvenile Probation Commission (TJPC), and students in private residential treatment centers” (TEA, 2008, p. 77).

Research Variables and Measurement

The state accountability rating system was selected as the criterion or dependent variable for all of the statistical analyses used in this study including ANOVA, chi-square, multiple regression and discriminant analysis, due to its importance as the primary benchmark for effectiveness of Texas schools. The rating system is recognized as the standard of academic achievement by Texas legislators, educators, policy makers and the public. The state accountability system has four ratings: exemplary, recognized, academically acceptable and academically unacceptable (TEA, 2008, p. 1). Most Texas schools have either recognized or academically acceptable ratings, with fewer schools earning either the best rating of exemplary or worst rating of academically unacceptable.

The 2008 state accountability rating system is primarily based on the Texas Assessment of Knowledge and Skills (TAKS) results and includes student completion rates and drop-out rates. In order for a campus to receive an exemplary rating, all students and individual student

groups of white, black, Hispanic and economically disadvantaged students must average 90% or better on TAKS scores in each tested subject area. A recognized campus must have all of the above student groups average a 75% passing rate or better in each tested area. An academically acceptable school must meet the following passing criteria for all the above student groups: 70% reading/ELA, 65% writing, 65% social studies, 50% mathematics, and 45% science.

Academically unacceptable campuses are those which fail to meet the academically acceptable standards (TEA, 2008, p. 42). Although there are exceptions to the above standards and an appeal process, for the purpose of this research, these aberrations are not covered here.

The first research question seeks to answer whether school type (charter or traditional public) has an effect on accountability ratings or if there is an association between school type and accountability rating. Therefore, accountability rating is the dependent variable and school type is the independent variable.

The second and third research questions seek to discover if there is a relationship between accountability ratings and twelve predictor or independent variables. The predictor variables used for this study were a) student/teacher ratio, b) percentage of instructional expenditure, c) average teacher experience, d) average teacher tenure, e) average teacher salary, f) average administrator salary, g) percentage of at-risk students h) percentage of LEP students, i) percentage of economically disadvantaged students, j) percentage of white students, k)

percentage of black students and l) percentage of Hispanic students. These predictor variables were analyzed to determine their relationship with accountability ratings and to establish comparisons between charter and traditional public school campuses.

Table 3.1

Variable Description

	Variable Description	Measurement	Variable Symbol
Criterion Variable	Accountability Rating	Ordinal	RATING
	School Type (Yes or No)	Dichotomous	CHARTER
	Average Student/Teacher Ratio	Interval/Ratio	ATSR
	Percentage of Instructional Expenditure	Interval/Ratio	EXPIN
	Average Teacher Experience	Interval	ATYE
	Average Teacher Tenure	Interval	ATYT
	Average Teacher Salary	Interval	ATS
Predictor Variables	Average Administrator Salary	Interval	AAS
	Percentage of At Risk Students	Interval/Ratio	ATRISK
	Percentage of LEP Students	Interval/Ratio	LEP
	Percentage of Economically Disadvantaged Students	Interval/Ratio	ECON
	Percentage of White Students	Interval/Ratio	WS
	Percentage of Black Students	Interval/Ratio	BS
	Percentage of Hispanic Students	Interval/Ratio	HS

Statistical Analyses

Research Question 1

A Pearson chi-square test with a crosstabulation table was utilized to compare charter and traditional public standard AP campuses with respect to accountability ratings and whether or not the accountability ratings were due to random chance. “The Pearson *Chi-square* is the most

common test for significance of the relationship between categorical variables. This measure is based on the fact that we can compute the *expected* frequencies in a two-way table (i.e., frequencies that we would *expect* if there was no relationship between the variables)” (StatSoft, 2008, chi-square). The assumption of having an expected frequency of at least five in each cell was met. “Crosstabulation is a combination of two (or more) frequency tables arranged such that each cell in the resulting table represents a unique combination of specific values of crosstabulated variables. Thus, crosstabulation allows us to examine frequencies of observations that belong to specific categories on more than one variable” (StatSoft, 2008, crosstabulation).

An ANOVA (analysis of variance) was utilized to determine if there was a statistically significant difference in the mean of the accountability rating as coded (exemplary=4, recognized=3, acceptable=2, and unacceptable=1) between standard AP charter campuses and standard AP traditional public campus. The ANOVA test is an appropriate tool since according to Roberts (2004), there are “[t]wo or more different groups measured on the same construct, typically on the same occasion” (Roberts, 2004, ANOVA). Unlike the literature review study, this analysis focused on standard AP open-enrollment charter schools and standard AP traditional schools with all campus charters and university charters removed from the data. The assumptions for an ANOVA include the use of random and independent samples, normal distribution of dependent variables, and homogeneity of variance (i.e. equal variance of the population distributions) (Hinkle, Jurs, & Wiersma, 2003, pp 344-345). All of these assumptions were checked and verified. Kurtosis and skewness values of the dependent variables were checked to determine whether or not they were normally distributed. Furthermore, the homogeneity of variance assumption was examined using the Levene’s test ($\alpha = .001$). Since the ratio of traditional public to charter campuses was about 35 to 1, a random sampling was done of

the traditional public campuses in order to have a balanced design resulting in 193 charter campuses, which represent the sum total of Texas standard AP charter campuses and 193 randomly selected traditional public campuses for a total 386 campuses. “Balanced design allows for a more robust analysis with regard to the assumptions of ANOVA” (Hinkle et al., 2003, p 346). An eta-squared (η^2) was run to determine the effect size and the confidence interval of 95% or ($\alpha = .05$) was used as the significance factor.

Research Questions 2 and 3

Descriptive statistics including the frequency, standard deviation and mean were chosen to analyze the twelve predictor or independent variables in order to enhance understanding of the overall research study. The mean was used to compare and contrast the differences between charter campuses and traditional public campuses. Furthermore, the standard deviation was used to review the degree of variation between charter campuses with respect to the independent variables. This analysis is valuable due to the fact that charters are relatively new and seem to have a variety of operational characteristics.

Multiple regression was chosen to determine if the predictor variables were related to the dependent variable of accountability rating. Multiple regression demonstrates to what extent the independent variable can be used to predict the value of the dependent variable. In other words, the study determined whether the predictor variables could be used to predict or explain the accountability ratings of the campuses.

For Research Question 2, a backward multiple regression determined the predictive power of the group of variables (or “synthetic” variable) and the independent variable. This baseline effect size was determined by performing simultaneous multiple regression. Subsequently, one predictor variable at a time was removed from the least to the greatest

predictive strength, and the regression was run again to determine its effect on the overall model. This process allowed SPSS to determine the best model by choosing the predictor variables for the greatest effect size.

Forward multiple regression was utilized to answer research question three. Forward multiple regression, like its name implicates, begins with the variable with the strongest correlation and then adds one variable at a time until the additional variable no longer has an influence on the overall correlation value.

The R^2 was used to determine the effect size or how much of the variability could be explained by the predictor variables. The assumptions for the multiple regression were checked, which included the normality of the data (skewness & kurtosis), linearity, homoscedasticity and homogeneity of variance at $\alpha = .05$. Any of the predictor variables that were skewed were then normalized. If there was a strong collinearity of variance, then the regressions were run separately.

Discriminant analysis was used to validate the results of the multiple regression. This technique was used to avoid any Type I or II errors, since accountability rating is ordinal and not interval. This analysis is appropriate since “discriminant function analysis is used to determine which variables discriminate between two or more naturally occurring groups” (StatSoft, 2008, discriminant). The same independent variables that were used in the multiple regression for each research question were duplicated in the discriminant analysis. The purpose of using the discriminant analysis was to determine if the same variables that were statistically significant in the regression were also statistically significant for the discriminant analysis.

Summary

Charter schools comprise an important part of education reform in the State of Texas and represent two percent of the student population and growing. The effectiveness of charter schools is important not only to charter students but to the general population as well. Therefore, the research here sought to determine if there is a statistically significant difference in accountability mean between standard AP charter campuses and traditional public campuses. Furthermore, the research sought to determine if there were any correlations between accountability ratings and the twelve independent variables as described in Table 3.1 for both charter campuses and traditional public campuses. The research provided a fair evaluation of charter campuses compared to traditional public campuses and established suitable predictor variables that may lead to higher accountability ratings. The methodology detailed in this chapter provided opportunities for research duplication and validity of results by following acceptable research standards. The results of the research follow in chapter 4.

CHAPTER 4

RESULTS

Introduction

Open-enrollment charter schools have generated considerable controversy in today's education reform movement. Although charter schools have some avid supporters, there are more detractors from the public education arena and others who are not aware of what a charter school is or why it exists. Since charter schools are a growing phenomenon in public education and currently represent 2% of all Texas students, further research is needed to determine the effectiveness or lack thereof in comparison to traditional public schools. The purpose of this research is to objectively evaluate charter school campuses versus traditional public school campuses and to determine if there is a statistically significant difference between the mean accountability ratings of standard accountability procedures (AP) open-enrollment charter school campuses versus traditional public school campuses. Next, the research is designed to determine which variables may be indicators or predictors of effective charter schools, thereby providing charter operators beneficial data to improve their schools. Finally, research analysis includes comparing and correlating accountability ratings and predictor variables gathered from AEIS data for standard AP open-enrollment charter campuses and standard AP traditional public campuses.

Descriptive Statistics of Variables

Table 4.1 as illustrated below displays descriptive statistics for charter campuses and traditional public campuses. The data includes 193 Texas standard AP open-enrollment charter campuses from the 2007-2008 school year. Since the charter campuses represent only 193 of the 7112 total or 2.7% of the campuses in the data set, charter school data does not greatly impact

Table 4.1

Descriptive Statistics

		AAS	ATS	ATYT	ATYE	LEP	ECON	ATRISK	BS	HS	WS	EXPIN	ATSR	RATING
Combined	Valid	6973	7100	7100	7100	7112	7112	7112	7112	7112	7112	7041	7101	7112
	Mean	\$66,945.04	\$45,060.44	7.447	11.369	15.861	57.308	46.023	13.553	44.569	38.863	71.826	14.079	2.650
	Std. Deviation	\$9,001.43	\$4,438.55	2.909	3.131	18.921	26.557	19.713	18.254	31.262	30.593	7.819	2.591	.748
	Skewness	.066	-.254	.184	-.236	1.590	-.230	.165	2.300	.437	.196	-1.946	-.352	.294
	Kurtosis	3.043	.486	.212	.523	1.886	-.963	-.545	5.660	-1.172	-1.366	16.685	2.658	-.631
Traditional	Valid	6806	6908	6908	6908	6919	6919	6919	6919	6919	6919	6883	6909	6919
	Mean	\$67,220.97	\$45,282.17	7.617	11.561	15.980	57.055	46.210	13.014	44.587	39.393	71.912	14.051	2.656
	Std. Deviation	\$8,609.96	\$4,187.421	2.754	2.905	18.955	26.42c8	19.538	17.344	31.195	30.557	7.620	2.515	.744
	Skewness	.191	.007	.373	.061	1.579	-.215	.179	2.303	.440	.173	-2.107	-.610	.313
	Kurtosis	2.143	-.268	.188	.055	1.830	-.963	-.563	5.845	-1.165	-1.368	18.758	1.115	-.651
Charter	Valid	167	192	192	192	193	193	193	193	193	193	158	192	193
	Mean	\$55,699.65	\$37,083.07	1.314	4.475	11.568	66.3 85	39.340	32.897	43.905	19.869	68.070	15.107	2.424
	Std. Deviation	\$15,290.29	\$5,691.38	1.135	3.182	17.151	29.500	24.340	33.408	33.654	25.44	13.459	4.438	.869
	Skewness	1.088	.110	1.448	1.229	2.131	-.864	.220	.831	.347	1.217	.249	.939	.113
	Kurtosis	6.041	.783	3.625	2.306	5.179	-.424	-.638	-.837	-1.405	.117	-.214	4.996	-.637

the combined total as illustrated by all of the variables. The descriptive statistics provide a valuable comparison of the similarities and differences between charter school campuses and traditional public school campuses.

Mean Accountability Rating

The mean accountability rating for charter schools was 2.424, while the mean for non-charter schools was 2.656 and the combined mean was 2.650. Therefore, traditional public school campuses have a higher average mean or a better average accountability rating. To determine the significance of the mean rating numbers, a discussion of the chi-square and ANOVA analyses follows.

Ethnicity and Special Populations

The average percentage of ethnicity composition of charter schools was 19.869% for White students, 32.897% for Black students, and 43.905% for Hispanic students. For non-charter schools, the average percentages of different ethnicities were 39.393% for White students, 13.014% for Black students, and 44.587% for Hispanic students. The combined average percentages of diverse ethnicities were 38.863% for White students, 13.553% for Black students, and 44.569% for Hispanic students. The ethnicity distribution of charter campuses may be related to the fact that charter schools are more densely located in urban areas.

The descriptive statistics indicate that traditional public campuses have a greater percentage of LEP students and at-risk students than charter schools but a smaller percentage of economically disadvantaged students. This analysis considers only standard AP campuses and does not include data from alternate education accountability schools.

Salary, Tenure and Experience

More differences exist in the mean scores of certain predictor variables between charters

and traditional public campuses. These variables include average teacher tenure and experience, which for charter campuses are 1.314 and 4.475 years respectively, and 7.617 and 11.561 years for traditional public campuses, respectively. Part of this discrepancy can be explained by the short span of existence for charters relative to traditional public schools. Furthermore, charter teachers are paid an average of \$8,199.10 less than traditional public school teachers, and charter administrators are paid an average of \$11,521.32 less than traditional public school administrators. Although charters have a greater percentage of campuses located in urban areas, charters have less students per campus and receive less funding than traditional public campuses, which may explain some of the discrepancy in salaries.

Research Question 1

Is there a statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses?

H₁ There is no statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses.

Chi-square

In order to test the Null Hypothesis 1, the chi-square test was used to investigate the relationship between accountability rating as a nominal variable and school type as a dichotomous variable, since the data consists of frequencies in discrete categories (Siegel & Castellan, 1988, pp. 45-50). The chi-square determines whether differences in the proportions exceed those expected as chance or random deviations from proportionality. A statistically significant chi-square results in the rejection of the null hypothesis that charter and traditional

public campuses are unrelated with respect to accountability ratings. The accountability ratings range from highest to lowest: exemplary, recognized, academically acceptable and academically unacceptable. The assumption of having at least a count of 5.00 in each cell was met.

Cramer’s *V* was used as a post-test to determine the strength of association after the chi-square determined significance. Cramer’s *V* is a recommended correlative technique with nominal data (Rayward-Smith, 2007, p. 3969). The Cramer’s *V* index varies between 0 and 1; the closer the index is to 1, the stronger the relationship.

Table 4.2

Accountability Ratings Crosstabulation

		Unacceptable	Acceptable	Recognized	Exemplary	Total
Traditional	Count	160	3032	2750	977	6919
	Expected Count	181.9	3026.6	2738.6	971.9	6919
	% within School Type	2.3%	43.8%	39.7%	14.1%	100%
	% of Total	2.2%	42.6%	38.7%	13.7%	97.3%
Charter	Count	27	79	65	22	193
	Expected Count	5.1	84.4	76.4	27.1	193
	% within School Type	14.0%	40.9%	33.7%	11.4%	100%
	% of Total	.4%	1.1%	.9%	.3%	2.7%

(table continues)

Table 4.2 (continued).

		Unacceptable	Acceptable	Recognized	Exemplary	Total
Total	Count	187	3111	2815	999	7112
	Expected Count	187	3111	2815	999	7112
	% within School Type	2.6%	43.7%	39.6%	14%	100.0%
	% of Total	2.6%	43.7%	39.6%	14%	100.0%

The crosstabulation indicates $n=7112$ campuses of which 6919 are standard AP traditional public school campuses and 193 are standard AP open-enrollment campuses. Of the traditional public school campuses, 2.3% earned an unacceptable rating, 43.8% earned acceptable, 39.7% earned recognized and 14.1% earned exemplary. The observed frequency count for the traditional public campuses is greater than expected for the ratings of academically acceptable, recognized and exemplary but less than the expected frequency for academically unacceptable. The charter campuses fared worse with 14% of campuses earning an academically unacceptable rating, 40.9% earning academically acceptable, 33.7% earning recognized and 11.4% earning exemplary. The observed count compared to the expected count had the opposite result for the charter campuses, with only the academically unacceptable rating having more than the expected count. The ratings of academically acceptable, recognized and exemplary all had counts less than expected from random distribution.

The Pearson chi-square test had an $\chi^2(3) = 100.466$, $p = .000$ or $p < .05$, which indicates that there is a significance in the relationship between school type and accountability rating. This test resulted in $V = 0.119$; therefore, although the relationship is significant, the association

between charter and traditional public campuses with accountability ratings is small. The result of the chi-square analysis indicates that the null hypothesis can be rejected but that the relationship is weak. Regardless, it can be stated that there is a relationship between charter and traditional public campuses with respect to accountability ratings. Furthermore, it can be stated that Texas standard AP traditional public school campuses are faring better than standard AP charter school campuses with respect to accountability ratings.

ANOVA

In order to validate the results of the chi-square as to the effect of school type on accountability ratings, an analysis of variance (ANOVA) was used to analyze the data when the accountability rating was viewed as the ordinal variable (exemplary=4, recognized=3, acceptable=2, and unacceptable=1). All of the assumptions were met, including random/independent samples, normal distribution and homogeneity of variance. The independent samples and balance design were achieved by taking 193 standard AP open-enrollment charter campuses and having SPSS randomly select 193 of the traditional public campuses for a total of 386 campuses. The skewness (.039) and kurtosis (-.527) of the dependent variable, accountability rating, fell between -1 and 1 which met the normality assumption, and the homogeneity of variance was satisfied at $p < .001$ for the Levene's test (Huck, 2004, pp 29-30). The ANOVA test resulted in $F(1, 384) = 14.126$, $p = .000$ at a 95% confidence interval ($\alpha = .05$). At $p < .05$ the results were statistically significant. The effect size was then determined by $\eta^2 = SS_b/SS_t$, or $\eta^2 = 3.5\%$. The mean of the charter campuses was 2.42 and the mean of the traditional public campuses was 2.73 (exemplary=4, unacceptable=1). This ANOVA validates the results of the chi-square that there is a statistically significant

relationship between accountability ratings and school type and that the null hypothesis 1 can be rejected.

Table 4.3

ANOVA Summary Table

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig	η^2
Between Groups	9.018	1	9.018	14.126	.000	.035
Within Groups	245.150	384	.638			
Total	254.168	385				

Discussion

The results for both the chi-square and the ANOVA demonstrate a significant relationship between school type and accountability ratings. Therefore, the null hypothesis 1 is rejected. Results indicate that the status of a traditional public campus is correlated with a better accountability rating but that the effect size for the ANOVA and the strength of the association of the chi-square are small.

Research Question 2

Are there any statistically significant correlations between chosen predictor variables (average student/teacher ratio, percentage expenditure on instruction, average teacher experience, average teacher tenure, average teacher salary, average administrator salary, percentage of at-risk students, percentage of LEP students, percentage of economically disadvantaged students, percentage of White students, percentage of Black students and percentage of Hispanic students) and accountability ratings for Texas standard AP open-enrollment charter campuses?

H₂ There are no correlations between the chosen predictor variables and accountability ratings for Texas standard AP open-enrollment charter campuses.

Multiple Regression

Multiple regression was chosen as the appropriate statistical analysis to test the second and third null hypotheses due to its ability to determine both significance and prediction in either a positive or negative direction. “Multiple regression analysis is a general statistical technique used to analyze the relationship between a single dependent variable and several independent variables” (Hair, Black, Babin, Anderson, & Tatham, 2006, p 159). Furthermore, multiple regression allows the researcher to test multiple predictor variables and select the best model based on the strength of the combined relationship between the variables. Thus, the researcher is able to choose the best model with the most predictive power and greatest effect size. At the same time, the individual predictor variables are able to be evaluated based on their individual predictive power or correlation with the criterion variable. It should be noted that correlation and prediction are different than cause and effect. The study does not indicate whether the predictor variables directly affect the criterion variable but only that the presence of the predictor variable is either positively or negatively associated with the criterion variable and the prediction power of the predictor variable on the criterion variable.

The data for the multiple regression included 193 Texas standard AP open-enrollment charter campuses. The dependent or criterion variable was accountability rating with four levels from highest to lowest: exemplary, recognized, academically acceptable and academically unacceptable. The independent or predictor variables included: a) student/teacher ratio, b) percentage of instructional expenditure, c) average teacher experience, d) average teacher tenure, e) average teacher salary, f) average administrator salary, g) percentage of at-risk students h)

percentage of LEP students, i) percentage of economically disadvantaged students, j) percentage of White students, k) percentage of Black students and l) percentage of Hispanic students.

Multiple regression analysis for the charter school data met the necessary assumptions including normality, linearity, homoscedasticity, and multicollinearity of variables. The normality of the data, skewness and kurtosis, were verified by running the descriptive statistics on the predictor variables. The skewness values for the percentage of LEP students (LEP) and average teacher tenure (ATYT) were both out of the acceptable range and had to be transformed using the square root method (Tabachnick & Fidell, 2007, pp 86-87). This process was effective in modifying the skewness so that LEP became .781 and ATYT became -.151.

The linearity assumption was met by using the P-P plot which demonstrated that all dependent variable residuals could be represented using a straight line. The homoscedasticity assumption was checked by the visual representation of the scatter plot of the “standardized predicted dependent variable (ZPRED in SPSS) by the standardized residuals (ZRESID in SPSS)” and was determined to be acceptable (Garson, 2009, homoscedasticity). The collinearity of the predictor variables was checked by the Pearson r coefficient, and it was determined that there were three groups which exceeded the threshold of $r = .6$: $r = -0.815$ (WS:ECON), $r = -0.651$ (BS:HS), and $r = 0.613$ (LEP:HS). Therefore, for this regression analysis, the percentage of White students (WS) and percentage of Hispanic students (HS) were removed. This deletion resulted in the final case to predictor variable ratio to be nearly satisfied at the 20:1 ratio by having 193 cases and 10 predictor variables.

The first model was generated by performing a simultaneous multiple regression with the 10 predictor variables, with the accountability rating as the dependent variable. The analysis

resulted in an effect size of 33% or the adjusted $R^2 = 0.330$. Therefore, the combination of predictor variables could explain 33% of the variance in the accountability ratings.

Table 4.4

Simultaneous Multiple Regression Coefficients

Model	Standardized Coefficients Beta	<i>t</i>	Sig.
AAS	-.032	-.406	.685
ATS	.213	2.488*	.014
ATYE	-.058	-.720	.473
ECON	.030	.294	.770
ATRISK	-.457	-5.272***	.000
BS	-.248	-2.503*	.014
EXPIN	-.048	-.625	.533
ATSR	.251	3.148**	.002
LEP_TRANS	-.064	-.638	.525
ATYT_TRANS	.131	1.575	.118
Adjusted R^2		.330	
<i>N</i>		138	

* $p < .05$, ** $p < .01$, *** $p < .001$

The baseline model indicated that four of the predictor variables had a statistically significant result at $p < .05$, including average teacher salary (ATS), percentage of at-risk students (ATRISK), percentage of black students (BS) and average student teacher ratio (ATSR). ATRISK had the strongest correlation at $\beta = -.457$, which means that as the percentage of at-risk students increases, the level of accountability rating is likely to decrease. The same observation can be made with BS; however, the $\beta = .248$ is a smaller prediction power than ATRISK.

Although the percentage of Hispanic students (HS) and BS exhibited a high collinearity, HS was not statistically significant with $p = .127$ when run independently of BS and percentage of LEP students (LEP). ATS and ATSR had a positive but small prediction capability with $\beta = .213$ and $\beta = .251$, respectively.

In order to determine the best regression model, backward regression was utilized. SPSS produced 7 models, of which model 6 produced the greatest adjusted R^2 with adjusted $R^2 = .348$. This model included almost a 2% greater effect size than the baseline model. The same four predictor variables as the baseline were still the only ones with a significance of $p < .05$, but average teacher tenure (ATYT) was chosen for inclusion in the model to strengthen the overall effect size. The beta weights for the four variables were all similar to the baseline model, except that percentage of at-risk students (ATRISK) had a slightly stronger prediction value, while percentage of Black students (BS), average teacher salary (ATS), and average student teacher ratio (ATSR) exhibited slightly weaker prediction values than the baseline model.

Table 4.5

Backward Multiple Regression Model Summary

Model	Predictors (Constant)	Adjusted R^2	Adjusted R^2 Change
1	(Constant), ATYT_TRANS, AAS, ECON, ATSR, EXPIN, BS, ATYE, ATRISK, ATS, LEP_TRANS	.330	
2	(Constant), ATYT_TRANS, AAS, ATSR, EXPIN, BS, ATYE, ATRISK, ATS, LEP_TRANS	.335	.005
3	(Constant), ATYT_TRANS, ATSR, EXPIN, BS, ATYE, ATRISK, ATS, LEP_TRANS	.339	.004
4	(Constant), ATYT_TRANS, ATSR, EXPIN, BS, ATYE, ATRISK, ATS	.342	.003
5	(Constant), ATYT_TRANS, ATSR, EXPIN, BS, ATRISK, ATS	.345	.003
6	(Constant), ATYT_TRANS, ATSR, BS, ATRISK, ATS	.348	.003
7	(Constant), ATSR, BS, ATRISK, ATS	.344	-.004

Table 4.6

Model 6 Coefficients

Model Predictors	Standardized Coefficients		T	Sig.
	Beta	r _s		
ATS	.185	.556	2.479*	.014
ATRISK	-.468	-.768	-6.508***	.000
6 ATSR	.248	.321	3.326**	.001
ATYT_TRANS	.092	.019	1.280	.203
BS	-.205	-.434	-2.836**	.005
(Constant)	2.665**		.009	(Constant)

* $p < .05$, ** $p < .01$, *** $p < .001$

Discriminant Analysis

Discriminant analysis was used to validate the results of the multiple regression, since the dependent variable of accountability rating is ordinal. This analysis is appropriate since “discriminant function analysis is used to determine which variables discriminate between two or more naturally occurring groups” (StatSoft, 2008, discriminant). The same independent variables used in the final multiple regression model for charter campuses were duplicated in the discriminant analysis which included a) percentage of at-risk students (ATRISK), b) average teacher salary (ATS), c) average student teacher ratio (ATSR), d) average teacher tenure (ATYT) and e) percentage of Black students (BS). The purpose of using the discriminant analysis was to determine whether the same variables that were statistically significant in the regression were also statistically significant in the discriminant analysis. The discriminant analysis validated the results of the multiple regression since the same variables were statistically significant at $p < .05$ per Table 4.7 below.

Table 4.7

Tests of Equality of Group Means

Variable	Wilks' Lambda	Sig.
ATRISK	.877	.000*
ATS	.881	.000*
ATSR	.950	.022*
ATYT	.999	.991
BS	.942	.010*

* $p < .05$

Table 4.8

Wilks' Lambda Test of Functions

Function	Wilks' Lambda	Chi-square	df	Sig.
1 through 3	.662	76.977	15	.000*
2 through 3	.994	11.605	8	.170
3	.984	3.096	3	.377

* $p < .05$

Furthermore, the function 1 through 3 test was statistically significant at $p < .05$, which demonstrated that the selected variables discriminated between the accountability rating of exemplary compared to recognized, academically acceptable and academically unacceptable.

Discussion

The null hypothesis 2 can be rejected since there is a statistically significant relationship between various predictor variables and the accountability rating. The stepwise backward regression determined an effect size of $R^2 = .348$ or 34.8%. Therefore, it can be said that the

synthetic group variable, including a) average teacher salary (ATS), b) percentage of at-risk students (ATRISK), c) average student teacher ratio (ATSR) d) average teacher tenure (ATYT) and e) percentage of Black students (BS), accounts for 34.8% of the variance in the accountability ratings. Only one of the predictor variables, ATYT, was not statistically significant. The ATRISK predictor variable displayed the strongest correlation with $\beta = -.468$, which indicates that as the percentage of at-risk students increases, the accountability rating decreases.

Structured coefficients (r_s) were used to “provide insight regarding what is the nature or structure of the underlying synthetic variables of the actual research focus” (Thompson, 1999, p. 15). Squaring the structural coefficient exposed the effect of each predictor variable on the synthetic variable. Percentage of at-risk students (ATRISK) had the greatest r_s value of $r_s = .768$. Therefore, of the 34.8% variance in the accountability ratings, the percentage of at-risk students accounted for 58.9% ($r_s^2 = .589$). In other words, the variable ATRISK represented 58.9% of the overall effect size, which indicates that as the percentage of at-risk students increases, the accountability rating decreases. Predictor variable average teacher salary (ATS) exhibited the next greatest r_s value at $r_s = .556$, which translates to 30.9% of the effect size or ($r_s^2 = .309$). Average student teacher ratio (ATSR) and percentage of Black students (BS) together represented 28% of the overall effect size. A lower percentage of Black students coupled with a higher student/teacher ratio resulted in a higher level of accountability ratings.

Research Question 3

Are there any statistically significant correlations between chosen predictor variables (average student/teacher ratio, percentage expenditure on instruction, average teacher experience, average teacher tenure, average teacher salary, average administrator salary, percentage of at-risk

students, percentage of LEP students, percentage of economically disadvantaged students, percentage of White students, percentage of Black students and percentage of Hispanic students) and accountability ratings for Texas standard AP traditional public school campuses?

H₃ There are no correlations between the chosen predictor variables and accountability ratings for Texas standard AP traditional public school campuses.

Multiple Regression

The data for the traditional public school campuses included all of the standard AP campuses in Texas, since the multiple regressions were run independently and did not require a balanced design. The predictor variables used in this regression were the same as those used in the charter school analysis and included the dependent or criterion variable of accountability rating, which has four levels from highest to lowest: exemplary, recognized, academically acceptable and academically unacceptable. The independent or predictor variables included a) student/teacher ratio, b) percentage of instructional expenditure, c) average teacher experience, d) average teacher tenure, e) average teacher salary, f) average administrator salary, g) percentage of at-risk students h) percentage of LEP students, i) percentage of economically disadvantaged students, j) percentage of White students, k) percentage of Black students and l) percentage of Hispanic students.

Multiple regression analysis for the traditional public school campuses met the necessary assumptions including normality, linearity, homoscedasticity, and multicollinearity of variables. The normality of the data, skewness and kurtosis were verified by running the descriptive statistics on the predictor variables. The skewness values for the variables percentage of LEP students (LEP) and percentage of Black students (BS) were both out of the acceptable range and had to be transformed using the square root method (Tabachnick & Fidell, 2007, pp 86-87). This

process was effective in modifying the skewness so that LEP_TRAN became .696 and BS_TRAN became -.873. The variables percentage of instructional expenditure (EXPIN) and average administrator salary (AAS) exhibited a kurtosis higher than desired; however, since the number of cases greatly exceeded the 100 threshold, this kurtosis should not affect the results of the regression. “Underestimates of variance associated with positive kurtosis disappear with samples of 100 or more cases.” (Tabachnick & Fidell, 2007, p.80).

The linearity assumption was met by using the P-P plot, which demonstrated that all the dependent variable residuals could be represented using a straight line. The homoscedasticity assumption was checked by the visual representation of the scatter plot of the “standardized predicted dependent variable (ZPRED in SPSS) by the standardized residuals (ZRESID in SPSS)” and was determined to be acceptable (Garson, 2009, homoscedasticity). The case to predictor variable ratio was easily satisfied at the 30:1 ratio by utilizing 6919 cases and 12 predictor variables. The collinearity of the predictor variables was checked by the Pearson r coefficient, and it was determined that there were eleven groups which exceeded the threshold of $r = .6$: $r = .766$ (ATYT:ATYE), $r = .623$ (ECON:LEP), $r = .724$ (ECON:HS), $r = -.780$ (ECON:WS), $r = .752$ (ECON:ATRISK), $r = -.696$ (ATRISK:WS), $r = .675$ (ATRISK:HS), $r = .693$ (ATRISK:LEP), $r = -.826$ (WS:HS), $r = -.692$ (WS:LEP) and $r = .701$ (LEP:HS).

Therefore, for this regression analysis, the following variables were selected as the baseline model: a) percentage of black students (BS), b) average administrator salary (AAS) c) average teacher salary (ATS), d) percentage of instructional expenditure (EXPIN), and e) average student/teacher ratio (ATSR), since they met the multicollinearity assumption. The baseline model was first generated by performing a simultaneous multiple regression with the 5 predictor variables and the accountability rating as the dependent variable. The analysis was

statistically significant with $p = .000$ and an effect size of adjusted $R^2 = .108$ or 10.8%. The predictor variable average teacher tenure (ATYT) was added, which changed the adjusted R^2 slightly to $R^2 = .109$. The predictor variable average teacher experience (ATYE) was added separately from ATYT due to the high collinearity, which changed the adjusted R^2 to $R^2 = .110$. Although ATYE had a greater effect on the adjusted R^2 value when added to the other 5 predictor variables than ATYT, when added with the additional predictor variables including percentage of at-risk students (ATRISK), ATYE had a lower adjusted R^2 value. Therefore, ATYT was chosen to be included with the new baseline model.

The new baseline model included: a) percentage of Black students (BS), b) average administrator salary (AAS), c) average teacher salary (ATS), d) percentage of instructional expenditure (EXPIN), e) average student teacher ratio (ATSR), and f) average teacher tenure (ATYT), resulting in $p = .000$ and adjusted $R^2 = .109$. The following predictor variables: a) percentage of at-risk students (ATRISK) b) percentage of economically disadvantaged students (ECON) c) percentage of LEP students (LEP), d) percentage of Hispanic students (HS), and e) percentage of White students (WS) were added one at a time to the baseline model and analyzed independently using a simultaneous multiple regression. The five additional predictor variables were run independently due to their high collinearity with each other. Adding the ATRISK variable resulted in the greatest influence on the effect size, with $p = .000$ and adjusted $R^2 = .217$. The next greatest influence on adjusted R^2 came from HS and ECON predictor variables, with adjusted R^2 values of .185 and .178 respectively. Therefore, a) BS, b) AAS, c) ATS, d) EXPIN, e) ATSR, f) ATYT, and g) ATRISK were chosen as the best model with the largest effect size of 21.7%.

In order to validate the selected model, a forward multiple regression was used. The forward multiple regression model adds one variable at a time until the effect size is no longer positively changed. In this case, the results of the forward multiple regression did not change the baseline model, since all of the predictor variables demonstrated a positive effect on the R^2 value and the final R^2 value remained at $R^2 = .217$.

Table 4.9

Forward Multiple Regression Models

Model	Predictors: (Constant)	Adjusted R^2	Adjusted R^2 Change
1	a. Predictors: (Constant), ATRISK	.105	
2	b. Predictors: (Constant), ATRISK, ATSR	.139	.034
3	c. Predictors: (Constant), ATRISK, ATSR, BS_TRANS	.167	.028
4	d. Predictors: (Constant), ATRISK, ATSR, BS_TRANS, EXPIN	.187	.020
5	e. Predictors: (Constant), ATRISK, ATSR, BS_TRANS, EXPIN, AAS	.211	.024
6	f. Predictors: (Constant), ATRISK, ATSR, BS_TRANS, EXPIN, AAS, ATS	.216	.005
7	g. Predictors: (Constant), ATRISK, ATSR, BS_TRANS, EXPIN, AAS, ATS, ATYT	.217	.001

The regression results indicated that all seven of the predictor variables had a statistically significant result at $p < .05$. Percentage of at-risk students (ATRISK) had the strongest correlation at $\beta = -.335$, which means that as the percentage of at-risk students increases, the level of accountability rating is likely to decrease. The same result is true with percentage of Black students (BS); however, the $\beta = -.185$ is a smaller prediction power than ATRISK. Percentage of White students (WS) and percentage of Hispanic students (HS) were not used in

the regression due to the strong collinearity of these variables with ATRISK. The beta weights were as follows: percentage of instructional expenditure (EXPIN), $\beta = .158$; average teacher student ratio (ATSR), $\beta = .137$; average administrator salary (AAS), $\beta = .118$; average teacher salary (ATS), $\beta = .085$ and average teacher tenure (ATYT), $\beta = .037$. All of these predictor variables, excluding ATRISK and BS, had a positive but small prediction capability.

Table 4.10

Multiple Regression Coefficients

Predictor Variable	Standardized Coefficients Beta	r_s	T	Sig.
AAS	.118	.285	9.020***	.000
ATS	.085	.253	5.768***	.000
ATSR	.137	.310	11.569***	.000
BS_TRANS	-.185	-.355	-16.652***	.000
EXPIN	.158	.394	14.345***	.000
ATYT	.037	.195	3.234***	.001
ATRISK	-.335	-.702	-30.650***	.000
Constant			2.172	.030

* $p < .05$, ** $p < .01$, *** $p < .001$

Discriminant Analysis

Discriminant analysis was used to validate the results of the multiple regression, since the dependent variable of accountability rating is ordinal. This analysis is appropriate since “discriminant function analysis is used to determine which variables discriminate between two or more naturally occurring groups” (StatSoft, 2008, discriminant). The same independent variables that were used in the multiple regression for traditional public school campuses were

duplicated in the discriminant analysis which included a) average administrator salary (AAS), b) average teacher salary (ATS), c) average student teacher ratio (ATSR), d) percentage of Black students (BS), e) percentage of instructional expenditure (EXPIN), f) average teacher tenure (ATYT) and g) percentage of at-risk students (ATRISK). The purpose of using the discriminant analysis was to determine if the same variables that were statistically significant in the regression were also statistically significant for the discriminant analysis.

Table 4.11

Tests of Equality of Group Means

Variable	Wilks' Lambda	Sig.
AAS	.978	.000*
ATS	.983	.000*
ATSR	.977	.000*
BS	.960	.000*
EXPIN	.962	.000*
ATYT	.991	.000*
ATRISK	.883	.000*

* $p < .05$

The discriminant analysis validated the results of the multiple regression, since the same variables were statistically significant at $p < .05$.

Table 4.12

Wilks' Lambda Test of Functions

Function	Wilks' Lambda	Chi-square	df	Sig.
1 through 3	.752	1927.030	21	.000*
2 through 3	.969	214.397	12	.000*
3	.992	57.536	5	.000*

* $p < .05$

All function tests were statistically significant at $p < .05$, which demonstrated that the variables discriminated between the accountability rating of exemplary, compared to recognized, academically acceptable and academically unacceptable.

Discussion

The null hypothesis 3 is rejected since there is a statistically significant relationship between various predictor variables for traditional public campuses and accountability ratings. The multiple regression determined an effect size of $R^2 = .217$ or 21.7%. Therefore, it can be said that the synthetic group variable, including a) percentage of at-risk students (ATRISK), b) average student teacher ratio (ATSR), c) percentage of Black students (BS), d) percentage of instructional expenditure (EXPIN), e) average administrator salary (AAS), f) average teacher salary (ATS), and g) average teacher tenure (ATYT) accounted for 21.7% of the variance in the accountability ratings. All of the predictor variables were statistically significant, with ATRISK displaying the strongest correlation of $\beta = -.335$. Structured coefficients (r_s) were used to “provide insight regarding what is the nature or structure of the underlying synthetic variables of the actual research focus” (Thompson, 1999, p. 15). Squaring the structural coefficient exposed the effect of each predictor variable on the synthetic variable. ATRISK had the greatest r_s value of $r_s = .702$. Therefore, of the 21.7% variance in the accountability ratings, the percentage of at-risk students accounted for 49% ($r_s^2 = .49$). In other words, the variable ATRISK represented 49% of the overall effect size, which indicates that as the percentage of at-risk students increases, the accountability rating decreases. Predictor variable EXPIN had the next greatest r_s value at $r_s = .394$, which translates to 15.5% of the effect size or ($r_s^2 = .155$). ATSR, BS and AAS together represented 30.3% of the overall effect size. A lower percentage of Black and at-risk students, higher student/teacher ratio, higher administrator salary and greater

percentage of instructional expenditure resulted in a higher level of accountability ratings. ATS and ATYT had very little influence on the overall effect size at about 10%.

CHAPTER 5

CONCLUSION & DISCUSSION

Introduction

This research compares the effectiveness of Texas standard AP open-enrollment charter school campuses to Texas standard AP traditional public school campuses. The analysis includes a comparison of the mean accountability ratings in order to determine if there is a statistically significant difference between charter school campuses and traditional public school campuses. Furthermore, the research determines the relationship between independent variables and accountability ratings for both charter and traditional public school campuses. The results of the research provide a balanced look at charters compared to traditional public schools and reveal indicators of effective and ineffective charter and traditional public campuses.

Data for the statistical analysis was extrapolated from the 2007-2008 Texas Academic Excellence Indicator System (AEIS), the compilation of data from all Texas school districts, including charters. The AEIS data provided the research variables, including the accountability ratings as the dependent variable and the independent variables: a) student/teacher ratio (ATSR), b) percentage of instructional expenditure (EXPIN), c) average teacher experience (ATYE), d) average teacher tenure (ATYT), e) average teacher salary (ATS), f) average administrator salary (AAS), g) percentage of at-risk students (ATRISK), h) percentage of LEP students (LEP), i) percentage of economically disadvantaged students (ECON), j) percentage of White students (WS), k) percentage of Black students (BS), and l) percentage of Hispanic students (HS).

As reported in the literature, there are multiple types of charter schools which could create an unfair comparison. However, for the purpose of this research, the charter schools under review were limited to Texas standard AP open-enrollment charters, which do not include

campus charters operated under an independent school district or university charters operated under a Texas university. Furthermore, only standard Accountability Procedures (AP) charter and traditional public schools were examined in this study in order to provide a fair comparison. Standard AP schools are those that operate under the general accountability system and serve the general student population, as compared to the alternative education accountability (AEA) schools which are designed to target at-risk students. Therefore, all campuses under the AEA rating system were removed from the data.

Research Questions

1. Is there a statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses?
2. Are there any statistically significant correlations between chosen predictor variables (average student/teacher ratio, percentage expenditure on instruction, average teacher experience, average teacher tenure, average teacher salary, average administrator salary, percentage of at-risk students, percentage of limited English proficiency (LEP) students, percentage of economically disadvantaged students, percentage of White students, percentage of Black students, percentage of Hispanic students) and accountability ratings for Texas standard AP open-enrollment charter campuses?
3. Are there any statistically significant correlations between chosen predictor variables (average student/teacher ratio, percentage expenditure on instruction, average teacher experience, average teacher tenure, average teacher salary, average administrator salary, percentage of at-risk students, percentage of LEP students, percentage of economically disadvantaged students, percentage of White students, percentage of Black students,

percentage of Hispanic students) and accountability ratings for Texas standard AP traditional public school campuses?

Methodology

In order to effectively analyze the data to answer the research questions, multiple statistical analyses were incorporated into this study including descriptive statistics, ANOVA, chi-square, multiple regression and discriminant analysis. The descriptive statistics included the population, mean, standard deviation, skewness and kurtosis which provide holistic understanding of the data and describe the similarities and differences between charters and traditional public campuses with regards to the independent variables.

The ANOVA and chi-square tests were utilized to answer the first research question by determining if there was a statistically significant difference in the mean accountability ratings between charters and traditional public campuses. Multiple regression including forward, backward and simultaneous multiple regression was used to answer the second and third research questions by determining if there were correlations between the independent variables and accountability ratings. The multiple regression analysis facilitated the degree to which the predictor variables can explain the variance of accountability ratings between campuses and identify variables with the greatest effect. Discriminant analysis was used to validate the results of the multiple regression by determining if the same variables that were statistically significant in the multiple regression were also statistically significant in the discriminant analysis.

Findings

Descriptive Statistics

The descriptive statistics reveal interesting differences between charter school campuses and traditional public school campuses in the areas of salaries, experience, and student

populations. The first major difference between the two entities is the area of salaries. Charter campuses pay significantly less money to administrators and teachers as compared to traditional public campuses. Charter administrator annual salaries average \$11,521.32 less or 17% below those of administrators in traditional public campuses. Charter teacher annual salaries average \$8,199.10 less or 18% below those of teachers at traditional public campuses.

Several factors may explain the salary discrepancy. The most important factor may be the difference in resources. Traditional public schools receive an average of 20%-30% more funding than charter schools. Furthermore, charters do not receive funding for facilities, which means that funds are required for leases, bonds or loans for their buildings. The second contributing factor to the salary discrepancy is the lack of teacher experience and tenure as compared to traditional public schools. Charter teachers have an average of six fewer years tenure and seven fewer years experience than their traditional public school counterparts. The difference in experience may contribute in part to the difference in salary. Finally, as mentioned in the literature review, charter teachers and administrators are less likely to have a master's degree or appropriate professional certification, which contributes to less pay.

A second difference between charters and traditional public school campuses exists in the area of employee experience. The discrepancy in teacher experience is significant and may be the result of multiple contributing factors. First, charters campuses have only existed since 1997 or later, and therefore have far less longevity than the average traditional public campus. Furthermore, charter schools are attracting non-teaching professionals who may lack appropriate certifications which are not required by law for charter educators. Flexibility in teacher credential requirements fulfills one of the purposes of charter schools in Texas to attract new teachers; however, it also lowers average teacher experience and tenure. Finally, a negative

public perception of charter schools may be another contributing factor to a lack of experienced teachers. The reputation of charters in general has been damaged by negative press regarding failing or ineffective charter schools. Negative press coupled with the inherent risks associated with a new venture are great challenges for charter schools in recruiting veteran teachers. Regardless of the reason, charter campuses have less experienced teachers than traditional public campuses.

The type of student served by charters and traditional public campuses also differs. The percentage of White and Black students is almost reversed between charters and traditional public campuses. Standard AP charter campus student demographics consist of 19% White students and 32% Black students, while traditional public school enrollment consists of 39% White students and 13% Black students. The percentage of Hispanic students is nearly identical for both charters and traditional public campuses, with 43% and 44%, respectively. Charters serve a smaller percentage of LEP students, with 4.47% compared to 11.56% at traditional public schools, and fewer at-risk students, with 39.34% compared to 46.21% at traditional public schools. These two statistics may be related, since LEP students are also considered at-risk. Charters serve a greater percentage of economically disadvantaged students, with 66.38% compared to 57.05% for traditional public campuses.

Research Question 1

Chi-Square

The Pearson chi-square test has an $\chi^2(3, N=7112) = 100.466, p = .000$ or $p < .05$, thereby demonstrating a statistically significant relationship between accountability rating and charter status. The crosstabulation revealed that traditional public campuses achieved better accountability ratings than charter campuses. Expected frequencies as compared to the observed

count support this conclusion. The observed count for traditional public campuses was higher for exemplary, recognized and academically acceptable and lower for academically unacceptable. The opposite is true for the charter campuses. Only the academically unacceptable rating had more than the expected count, while the ratings of academically acceptable, recognized and exemplary all had counts less than expected from random distribution. The Craver's V test, which shows the strength of the chi-square analysis, resulted in $V = .119$; therefore, although the relationship is significant, the association between charter status and accountability rating is small.

ANOVA

The results of the chi-square analysis were validated by the ANOVA, which resulted in $F(1, 384) = 14.126, p = .000$ at a 95% confidence interval ($\alpha=.05$). At $p < .05$ the results were statistically significant, thereby demonstrating a statistically significant relationship between accountability ratings as the dependent variable and school type as the independent variable. The effect size was small at $\eta^2 = 3.5\%$. The mean of the charter campuses was 2.42 and the mean of the traditional public campuses was 2.73 (exemplary=4, unacceptable=1). Therefore, according to the ANOVA and the mean of the accountability rating, standard AP traditional campuses are achieving higher accountability ratings than standard AP charter campuses. Since the effect size of the ANOVA is small, the variance caused by the independent variable charter status on the accountability rating is small.

The results of the chi-square analysis and ANOVA indicate that the null hypothesis 1 can be rejected and that there is a relationship between charter and traditional public campuses with respect to accountability rating. It can be further stated that Texas standard AP traditional public campuses fare better than standard AP charter campuses in the area of accountability ratings.

The results of this research question validate the results in the literature review. In Texas, traditional public schools achieve better accountability ratings than charter schools. However, the rating difference between charter and traditional public campuses is small. Furthermore, the discrepancy in funding between charter and traditional public campuses, the greater percentage of minority and economically disadvantaged students served by charters, and the concentration of charters in urban areas mitigate these results. The literature review also depicted that students in charter schools for four consecutive years had the highest reading/ELA and math passing rates and demonstrated the greatest gains on the 2007 TAKS tests. Furthermore, there was positive “monotonic (one direction or order) relationship between” continuous years of enrollment in a charter school and 2006 and 2007 TAKS passing rates (Brinson et al., 2008, p. 148). The results for Texas standard AP charter campuses are mixed, and the results of this research can validate the findings of Lubienski and Lubienski (2006), that “charter schools are neither the unqualified failure that detractors claim, nor that there is something inherent in the independent structure of charter school organization that promotes greater student achievement, as choice enthusiasts would have us believe” (p. 36).

Research Questions 2 and 3

Multiple Regression

Multiple regression analysis was used as the appropriate tool to answer research questions two and three. The results of the regressions demonstrated that the relationship between accountability ratings and the independent variables were statistically significant for both charter campuses and traditional public campuses. Therefore, the null hypotheses 2 and 3 are rejected. Although the results were statistically significant for both charter and traditional

campuses, some similarities and differences existed in the independent variables, effect size and strength of relationship.

The multiple regression for traditional campuses was performed with both a simultaneous and forward regression model. The number of predictor variables used for the traditional campus multiple regression analysis was limited due to the high multicollinearity of the independent variables with one another. Therefore, the variables selected were limited to the following: a) percentage of Black students (BS), b) average administrator salary (AAS), c) average teacher salary (ATS), d) percentage of instructional expenditure (EXPIN), e) average student teacher ratio (ATSR), f) average teacher tenure (ATYT), and g) percentage of at-risk students (ATRISK). All seven independent variables were statistically significant at $p < .001$. ATRISK had the strongest correlation with $\beta = -.335$, BS was next with $\beta = -.185$, EXPIN was $\beta = .158$, ATSR was $\beta = .137$ and AAS was $\beta = .118$. The combined effect size of all seven variables was 21.7%, with 49% attributed to ATRISK and 46% attributed to the combined effect of BS, EXPIN, ATSR and AAS.

Charter campuses were analyzed using simultaneous multiple regression and backward multiple regression. Only two of the 12 predictor variables, percentage of White students (WS) and percentage of Hispanic students (HS), were excluded from the analysis due to their multicollinearity with the other variables. Therefore, the ten variables selected for the analysis included: a) average student teacher ratio (ATSR), b) percentage of instructional expenditure (EXPIN), c) average teacher experience (ATYE), d) average teacher tenure (ATYT), e) average teacher salary (ATS), f) average administrator salary (AAS) g) percentage of at-risk students (ATRISK), h) percentage of LEP students (LEP), i) percentage of economically disadvantaged students (ECON), and j) percentage of Black students (BS). The simultaneous multiple

regression resulted in a baseline model with the effect size of 33% or the adjusted $R^2 = .330$. Therefore, the baseline model which included all ten independent variables could explain 33% of the variance in the accountability ratings of the charter campuses. A backward regression was performed to determine the best model of independent variables that would produce the greatest effect size. The selected model included a) ATS, b) ATRISK, c) BS, d) ATSR and e) ATYT and produced an effect size of $R^2 = .348$ or 34.8%. Therefore, these five independent variables could explain 34.8% of the variance in the accountability ratings. All five variables were statistically significant at $p < .05$ or better, except ATYT which was included for the strength added to the effect size. ATRISK had the strongest correlation similar to the traditional campuses with $\beta = -.468$ and was followed by ATSR with $\beta = .248$, BS with $\beta = .205$ and ATS with $\beta = .185$. Structured coefficients determined that ATRISK represented 58.9% of the overall effect size. Predictor variable ATS had the next greatest impact on the effect with 30.9% or ($r_s^2 = .309$). ATSR and BS together represented 28% of the overall effect size.

Conclusion

According to the ANOVA and chi-square analyses, there is a statistically significant difference in the accountability ratings of Texas standard AP traditional public campuses and standard AP charter campuses, with the traditional campuses achieving a higher accountability mean score. However, since the effect size and strength of the correlation is small, while statistically significant, the analysis does not indicate decisively that traditional campuses are academically more effective than charter campuses. Furthermore, this study does not take into consideration the effect of differences in ethnicities or student groups in these results other than the fact that traditional campuses have more at-risk students and charters have more Black students, which are both negatively correlated with accountability rating. Moreover, the study

does not consider the longevity or the location of the campuses, which could have an effect on accountability ratings. Therefore, it should be concluded that school type has an effect on accountability ratings and that the null hypothesis 1 can be rejected. However, the results are negligible and more longitudinal research is needed.

The regressions for both traditional and charter campuses reveal interesting results. The most significant result is the effect of the percentage of at-risk students (ATRISK) on both charter and traditional campus accountability ratings. Regression does not necessarily indicate cause and effect but rather prediction. Therefore, the research does not indicate that the presence of at-risk students causes a lower accountability rating but it is a predictor of a lower accountability rating. This observation can be compared to the old “chicken and the egg” question of which came first. Did enrollment of at-risk students cause a lower accountability rating or did the quality of the district result in more students becoming at-risk? Understanding the triggers that cause a person to be coded at-risk may be beneficial here. In Texas a student is coded at-risk if the student:

- (1) was not advanced from one grade level to the next for one or more school years;
- (2) is in grade 7, 8, 9, 10, 11, or 12, did not maintain an average equivalent to 70 on a scale of 100 in two or more subjects in the foundation curriculum during a semester in the preceding or current school year, or is not maintaining such an average in two or more subjects in the foundation curriculum in the current semester;
- (3) did not perform satisfactorily on an assessment instrument administered to the student under Subchapter B, Chapter 39, and who has not in the previous or current school year subsequently performed on that instrument or another appropriate instrument at a level equal to at least 110 percent of the level of satisfactory performance on that instrument;
- (4) is in prekindergarten, kindergarten, or grade 1, 2, or 3, and did not perform satisfactorily on a readiness test or assessment instrument administered during the current school year;
- (5) is pregnant or is a parent;
- (6) has been placed in an alternative education program in accordance with Section 37.006 during the preceding or current school year;

- (7) has been expelled in accordance with Section 37.007 during the preceding or current school year;
- (8) is currently on parole, probation, deferred prosecution, or other conditional release;
- (9) was previously reported through the Public Education Information Management System (PEIMS) to have dropped out of school;
- (10) is a student of limited English proficiency, as defined by Section 29.052;
- (11) is in the custody or care of the Department of Protective and Regulatory Services or has, during the current school year, been referred to the department by a school official, officer of the juvenile court, or law enforcement official;
- (12) is homeless, as defined by 42 U.S.C. Section 11302, and its subsequent amendments; or
- (13) resided in the preceding school year or resides in the current school year in a residential placement facility in the district, including a detention facility, substance abuse treatment facility, emergency shelter, psychiatric hospital, halfway house, or foster group home (TEC 29.081).

Therefore, from this definition both at-risk enrollment and district quality are factors affecting a school's accountability rating. Although districts can have an effect on students becoming at-risk due to poor academic quality, some students are at-risk due to no fault of the district but rather as a result of personal choices and societal problems. Therefore, although a district may have limited control of its at-risk population, ATRISK may be used as an indicator to facilitate reevaluation of policies and procedures if the percentage of at-risk students is abnormally high. Furthermore, at-risk students should receive extra instructional and service support necessary for academic success. Therefore, identification and intervention should be necessary strategies for all campuses, whether charter or traditional.

Both regressions indicate that the percentage of Black students (BS) had the highest beta value second only to the percentage of at-risk students (ATRISK), although BS had less than half the strength of ATRISK. The correlation was negative similarly to ATRISK, indicating that the greater the BS, the lower the accountability rating. However, due to high multicollinearity with other ethnic groups, percentage of White students (WS) and percentage of Hispanic students

(HS) were not used in the regression. Therefore, the conclusions of BS should be minimized until further research is done to determine the effect of all ethnicities on accountability ratings.

Average student teacher ratio (ATSR) was statistically significant for charters and traditional campuses alike and had a correlation of $\beta = .248$ for charters and $\beta = .137$ for traditional campuses. While the strength of correlation is small, ATSR is stronger for charters than traditional campuses. The positive correlation indicates that as the student to teacher ratio increases, the accountability rating improves. This result seems counterintuitive and would obviously have a limit or a non-linear correlation once the ratio becomes too large. The mean score for ATSR was just over one student more for charter campuses than traditional campuses, but charter campuses had a larger standard deviation than traditional campuses, which may have affected the strength of correlation. A possible explanation of this phenomenon, especially for charters, is that higher enrollment numbers increase revenue for a campus and therefore may enhance academic quality. The result could also reflect better planning or management of class size to improve academic quality. Unlike traditional public schools, charter schools are schools of choice selected by parents and students. Therefore, larger student enrollment may reflect parent satisfaction, which may indicate the quality of the charter. While it is doubtful that a larger student to teacher ratio raises academic quality, the result may indicate that academic quality already exists and should be examined.

The multiple regression analysis of charters and traditional public campuses also exhibited differences. Traditional public campus percentage of instructional expenditure (EXPIN) and average administrator salary (AAS) demonstrated statistically significant results in relationship to accountability rating. The correlation was positive but small, with EXPIN $\beta = .158$ and AAS $\beta = .118$. These correlations logically demonstrate that a greater percentage of

expenditure on instruction and greater administrator salary result in higher accountability ratings. However, this conclusion lacks great significance due to the weak correlation strength.

Average teacher salary (ATS) was statistically significant for charter campuses at $\beta = .185$. Furthermore, in the backward regression, ATS increased the overall R^2 value by .034, which was second only to percentage of at-risk students (ATRISK). The analysis implies that as the ATS increases, so does the accountability rating. Again, this result may not be a cause and effect relationship but an indicator, due to a much greater standard deviation for teacher salaries in charter campuses than traditional public campuses. Therefore, teacher salary may be a clear indicator of more effective charter schools. One explanation for this correlation may be that academic success leads to enrollment increases which provide more money for teacher salaries, resulting in recruitment of better teachers to facilitate higher academic achievement. Whatever the relationship may be, ATS is a significant indicator of accountability ratings for charter campuses.

Probably the most significant difference in the results of the regression for charter campuses and traditional campuses is the effect size. The independent variables had a 34.8 % effect on the accountability rating for charter campuses but only 21.7% for traditional public school campuses. This difference may be related to the existence of significant variations even among charter campuses themselves, as demonstrated by the large standard deviations of the independent variables of charter campuses compared to traditional public campuses. Unlike traditional public schools, there is a greater disparity between charter campuses than exists between traditional public campuses. The performance of charter schools reflects this analysis. Standard AP charters displayed less than 3% difference in the number of exemplary campuses compared to the traditional campuses, but over 11% more charter campuses received an

unacceptable rating as compared to the traditional campuses. Thus a wide disparity exists among charter campuses and their independent variables. Therefore, the independent variables may comprise a tool in identifying and diagnosing the effectiveness or ills of charter campuses much more effectively than traditional campuses.

Recommendations

As a result of this research, many more questions have been generated. The following are just a few of the many follow-up research questions or studies that could be conducted to provide meaningful information to stakeholders about charters.

1. What variables may contribute or be correlated to the academic achievement of alternative education accountability (AEA) campuses?
2. Why do charter schools receive significantly less funding than traditional schools? Does this funding discrepancy violate the equal protection clause? What happened during the legislative origins of charters that may have contributed to this inequity?
3. Why is there such a discrepancy between teacher experience and tenure at charter schools compared to traditional public schools? Why do teachers decide to teach at a charter and why do they decide to leave?
4. What is the cause of the high standard deviation of salaries for charter teachers and administrators? Why are some charters able to offer a competitive salary and others are not?
5. How are standard AP charter campuses performing compared to standard AP traditional campuses in relation to academic achievement of different ethnicities and student groups?

6. What is the longitudinal effect of continuous enrollment in a charter school as compared to a traditional public school?
7. How would charter campuses compare to traditional campuses if all of the currently unacceptable charter campuses were closed? Why does the state not take more decisive action in closing ineffective charter schools? Have free-market principles assisted in the closure of ineffective charters and if not, why not?
8. Conduct a case study of both exemplary and academically unacceptable charter campuses and use both qualitative and quantitative methodologies to determine best practices.

The following recommendations have resulted from this study and years of experience in a charter school. These recommendations provide a call for more research and more action. In order for charter schools to succeed as a tool in educational reform, the government must change the current paradigm of charter school operation. In Texas and around the country, charter schools receive significantly less funding than their traditional public counterparts, especially with respect to facilities. Charters as a whole will never be able to compete on the same level as traditional public schools without equitable funding. A few charters have received private funding due to initial success and outstanding private sector connections. While these charters have a greater chance to achieve long-term success, their impact is limited to their local influence and enrollment. Without increased public financial support, charters in general will not have the sustainability and broad education reform influence as intended.

Another problem that exists in Texas as mentioned in the literature review is that too many charters were authorized without the necessary scrutiny. Therefore, Texas has too many mediocre and failing charter schools. These failing charters are a black eye on the charter school

movement as a whole and drain the limited resources that should be available to effective charters. Therefore, the state must close academically unsuccessful charters and assist charters with a proven track record by providing them with equitable resources comparable to traditional public school counterparts. Effective charters need to be funded and replicated, while ineffective charters should be closed by the state. It is fundamentally unfair to both children and educators to continue the current inequitable funding paradigm.

The state must demonstrate commitment to the success of the charter movement and education reform in several ways. First, the state should continue the research, monitoring and evaluation of charter schools. Second, it must begin to fund charter schools to the same degree as traditional public schools. Third, the state should shut down those charter schools which are obviously ineffective in their academic quality and resource management. Finally, the state should replace failing charters with those schools with a proven track record of success and provide them the necessary resources.

Will charter schools as an education reform movement continue for the foreseeable future or will they fade into the oblivion of many previous unsuccessful reform movements? If the state legislature does not change the current paradigm of funding and monitoring charter schools, few charters will be able to sustain academic achievement or positively impact the public education arena as designed. Charter schools have achieved mixed results and will continue to have modest success until significant changes are implemented. It is important to conduct more research on effective and ineffective charters so that all schools are given the best chance to attain success and maximize student achievement.

To conclude, a quote from Albert Shanker (1988), former AFT president and instrumental catalyst in the charter school movement from his weekly publication in the *New York Times*, states:

Over time, we can expect charter schools to stimulate a different and more effective school structure. But just as medical researchers trying to find a cure for a disease or product developers hoping for a new breakthrough in business don't know in advance whether what they're aiming for will be found in a few years or a few decades, neither will charter school teams. A demand for quick results will send the message that only quacks need apply for charters (¶ 13).

Therefore, it is important to understand that charters are not an instant cure for all educational ills and will need more time to have an effective impact. The fate of charter schools is still to be decided.

APPENDIX A
RESEARCH MATRIX

Purpose/Rationale	Problem Statement	Research Questions	Research Hypotheses	Statistics/Data Analyses
The specialization and variety of Texas charter schools complicate a fair comparison with traditional public schools. With the abundance of negative press highlighting failing charter schools, it is important to create a fair comparison between charter campuses and traditional public campuses by focusing on a specific type of charter.	To evaluate the effectiveness of Texas standard AP open-enrollment charter campuses by comparing their accountability ratings with those of standard AP traditional public campuses.	Is there a statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses?	There is no statistically significant difference between the mean accountability ratings of standard AP open-enrollment charter school campuses versus standard AP traditional public school campuses.	The Pearson chi-square (Goodness-of-Fit) test is used to determine if there is a statistically significant difference between the expected count and the observed count. <i>Charter Status</i> and Accountability Rating An ANOVA is used to determine if there is a statistically significant difference between the mean accountability rating of charter school campuses versus traditional public campus.
Based on the accountability ratings of charter schools, a significant discrepancy exists between effective and ineffective charter schools. This discrepancy may be due to the disparity among charter operators and their practices. It would be beneficial to the education community to determine which variables may be predictors of accountability ratings.	To evaluate twelve independent variables to determine their relationship to accountability ratings, thereby providing charter operators indicators or predictors of accountability ratings to facilitate better academic quality.	Are there any statistically significant correlations between the chosen predictor variables and accountability ratings for Texas standard AP open-enrollment charter campuses?	There are no correlations between the chosen predictor variables and accountability ratings for Texas standard AP open-enrollment charter campuses.	Multiple regression is used to determine the relationship between accountability ratings and the predictor/independent variables. The correlation measures both the strength and direction of the relationship. R^2 is used to determine the percentage of variation that the independent variables can explain. To validate the multiple regression, discriminant analysis was also utilized. Discriminant Analysis is used to determine which variables are the best predictors of accountability rating.

Purpose/Rationale	Problem Statement	Research Questions	Research Hypotheses	Statistics/Data Analyses
<p>Charter schools have only been in existence a relatively short period of time, especially in comparison to traditional public schools. Traditional public schools do not have the same disparity between schools and accountability ratings. This study will provide charter campuses a model for comparison and effective evaluation.</p>	<p>To evaluate twelve independent variables to determine their relationship to accountability ratings, thereby providing a baseline model to compare the similarities and differences between charter schools and traditional public schools in relation to the outcomes of the regression.</p>	<p>Are there any statistically significant correlations between chosen predictor variables and accountability ratings for Texas standard AP traditional public school campuses?</p>	<p>There are no correlations between the chosen predictor variables and accountability ratings for Texas standard AP traditional public school campuses.</p>	<p>Multiple Regression is used to determine the relationship between accountability ratings and the predictor/independent variables. The correlation measures both the strength and direction of the relationship. R^2 is used to determine the percentage of variation that the independent variables can explain. To validate the multiple regression, discriminant analysis was also utilized. Discriminant Analysis is used to determine which variables are the best predictors of accountability ratings.</p>

APPENDIX B

TEXAS STANDARD AP OPEN-ENROLLMENT CHARTER CAMPUSES

Charter Name	Campus Name	Accountability Rating
ALIEF MONTESSORI COMMUNITY SCHOOL	ALIEF MONTESSORI COMMUNITY SCHOOL	Exemplary
ARLINGTON CLASSICS ACADEMY	ARLINGTON CLASSICS ACADEMY	Exemplary
BURNHAM WOOD CHARTER SCHOOL DISTRI	DAVINCI SCHOOL FOR SCIENCE AND TH	Exemplary
BURNHAM WOOD CHARTER SCHOOL DISTRI	HOWARD BURNHAM ELEMENTARY SCHOOL	Exemplary
HARMONY ELEMENTARY (AUSTIN)	HARMONY ELEMENTARY-AUSTIN	Exemplary
HARMONY SCHOOL OF EXCELLENCE	HARMONY SCHOOL OF EXCELLENCE	Exemplary
HARMONY SCHOOL OF INNOVATION	HARMONY SCHOOL OF INNOVATION	Exemplary
HARMONY SCIENCE ACAD (EL PASO)	HARMONY SCIENCE ACAD (EL PASO)	Exemplary
HARMONY SCIENCE ACAD (FORT WORTH)	HARMONY SCIENCE ACAD (FORT WORTH)	Exemplary
HARMONY SCIENCE ACAD (SAN ANTONIO)	HARMONY SCIENCE ACAD (SAN ANTONIO	Exemplary
HARMONY SCIENCE ACADEMY (AUSTIN)	HARMONY SCIENCE ACADEMY - AUSTIN	Exemplary
KIPP INC CHARTER	KIPP ACADEMY MIDDLE SCHOOL AND HIG	Exemplary
NORTH HILLS SCHOOL	NORTH HILLS PRIMARY SCHOOL	Exemplary
NORTH HILLS SCHOOL	NORTH HILLS SCHOOL	Exemplary
PEAK PREPARATORY SCHOOL	WILLIAMS PREPARATORY	Exemplary

Charter Name	Campus Name	Accountability Rating
RISE ACADEMY	RISE ACADEMY	Exemplary
SEASHORE LEARNING CTR CHARTER	SEASHORE LEARNING CTR	Exemplary
WESTLAKE ACADEMY CHARTER SCHOOL	WESTLAKE ACADEMY	Exemplary
YES PREPARATORY PUBLIC SCHOOLS	YES PREP - EAST END CAMPUS	Exemplary
YES PREPARATORY PUBLIC SCHOOLS	YES PREP - LEE	Exemplary
YES PREPARATORY PUBLIC SCHOOLS	YES PREP - NORTH CENTRAL CAMPUS	Exemplary
YES PREPARATORY PUBLIC SCHOOLS	YES PREP - SOUTHEAST CAMPUS	Exemplary
ACCELERATED INTERMEDIATE ACADEMY	ACCELERATED INTERDISCIPLINARY ACA	Recognized
ACCELERATED INTERMEDIATE ACADEMY	ACCELERATED INTERDISCIPLINARY ACA	Recognized
AMIGOS POR VIDA-FRIENDS FOR LIFE P	AMIGOS POR VIDA-FRIENDS FOR LIFE	Recognized
AUDRE AND BERNARD RAPOPORT ACADEMY	AUDRE AND BERNARD RAPOPORT ACADEM	Recognized
AUDRE AND BERNARD RAPOPORT ACADEMY	RAPOPORT ACADEMY-QUINN CAMPUS	Recognized
AUSTIN DISCOVERY SCHOOL	AUSTIN DISCOVERY SCH	Recognized
BEATRICE MAYES INSTITUTE CHARTER S	BEATRICE MAYES INSTITUTE CHARTER	Recognized
CHILDREN FIRST ACADEMY OF HOUSTON	CHILDREN FIRST ACADEMY OF HOUSTON	Recognized

Charter Name	Campus Name	Accountability Rating
EAGLE ACADEMIES OF TEXAS	VISTA ACADEMY OF AMARILLO	Recognized
EAGLE ACADEMIES OF TEXAS	VISTA ACADEMY OF HICKORY CREEK	Recognized
EAST FORT WORTH MONTESSORI ACADEMY	EAST FORT WORTH MONTESSORI ACADEMY	Recognized
EDEN PARK ACADEMY	EDEN PARK ACADEMY	Recognized
FORT WORTH ACADEMY OF FINE ARTS	FORT WORTH ACADEMY OF FINE ARTS	Recognized
FORT WORTH ACADEMY OF FINE ARTS	FORT WORTH ACADEMY OF FINE ARTS E	Recognized
FRUIT OF EXCELLENCE	FRUIT OF EXCELLENCE SCHOOL	Recognized
GIRLS & BOYS PREP ACADEMY	GIRLS & BOYS PREP ACADEMY ELEMENT	Recognized
GIRLS & BOYS PREP ACADEMY	GIRLS & BOYS PREP ACADEMY MIDDLE	Recognized
HARMONY SCIENCE ACAD (BEAUMONT)	HARMONY SCIENCE ACADEMY (BEAUMONT)	Recognized
HARMONY SCIENCE ACAD (COLLEGE STAT	HARMONY SCIENCE ACAD (COLLEGE STA	Recognized
HARMONY SCIENCE ACAD (LUBBOCK)	HARMONY SCIENCE ACAD (LUBBOCK)	Recognized
HARMONY SCIENCE ACAD (WACO)	HARMONY SCIENCE ACAD (WACO)	Recognized
HARMONY SCIENCE ACADEMY	HARMONY SCIENCE ACADEMY	Recognized
HARMONY SCIENCE ACADEMY	HARMONY SCIENCE ACADEMY - HOUSTON	Recognized

Charter Name	Campus Name	Accountability Rating
HARMONY SCIENCE ACADEMY	HARMONY SCIENCE ACADEMY -DALLAS	Recognized
HOUSTON HEIGHTS LEARNING ACADEMY I	HOUSTON HEIGHTS LEARNING ACADEMY	Recognized
IDEA ACADEMY	IDEA ACADEMY	Recognized
IDEA ACADEMY	IDEA COLLEGE PREP	Recognized
IDEA ACADEMY	IDEA FRONTIER COLLEGE PREPARATORY	Recognized
IDEA ACADEMY	IDEA QUEST ACADEMY	Recognized
IDEA ACADEMY	IDEA QUEST COLLEGE PREPARATORY	Recognized
KATHERINE ANNE PORTER SCHOOL	KATHERINE ANNE PORTER SCHOOL	Recognized
KIPP ASPIRE ACADEMY	KIPP ASPIRE ACADEMY	Recognized
KIPP AUSTIN COLLEGE PREP SCH INC	KIPP AUSTIN COLLEGE PREP	Recognized
KIPP INC CHARTER	KIPP 3D ACADEMY	Recognized
KIPP INC CHARTER	KIPP GULFTON LOWER SCHOOL	Recognized
KIPP INC CHARTER	KIPP NE LOWER SCHOOL DREAM	Recognized
KIPP INC CHARTER	KIPP SW LOWER SCHOOL SHINE	Recognized
KIPP SOUTHEAST HOUSTON	KIPP LIBERATION COLLEGE PREP	Recognized

Charter Name	Campus Name	Accountability Rating
KIPP SOUTHEAST HOUSTON	KIPP SPIRIT COLLEGE PREP	Recognized
KIPP TRUTH ACADEMY	KIPP TRUTH ACADEMY	Recognized
MAINLAND PREPARATORY ACADEMY	MAINLAND PREPARATORY ACADEMY	Recognized
MIDLAND ACADEMY CHARTER SCHOOL	MIDLAND ACADEMY CHARTER SCHOOL	Recognized
NEW FRONTIERS CHARTER SCHOOL	EARLY CHILDHOOD ACADEMY	Recognized
NORTH TEXAS ELEMENTARY SCHOOL OF T	NORTH TEXAS ELEMENTARY SCHOOL OF	Recognized
OUTREACH WORD ACADEMY	OUTREACH WORD ACADEMY	Recognized
PEAK PREPARATORY SCHOOL	PEAK ACADEMY	Recognized
PEAK PREPARATORY SCHOOL	PEAK ADVANTAGE	Recognized
RAPOPORT ACADEMY PREP SCH	RAPOPORT ACADEMY PREP SCH	Recognized
SCHOOL OF SCIENCE AND TECHNOLOGY	SCHOOL OF SCIENCE AND TECHNOLOGY	Recognized
SEASHORE MIDDLE ACAD	SEASHORE MIDDLE ACAD	Recognized
SER-NINOS CHARTER SCHOOL	SER-NINOS CHARTER EL	Recognized
SER-NINOS CHARTER SCHOOL	SER-NINOS CHARTER MIDDLE	Recognized
ST ANTHONY SCHOOL	ST ANTHONY ACADEMY	Recognized

Charter Name	Campus Name	Accountability Rating
ST ANTHONY SCHOOL	ST ANTHONY SCHOOL	Recognized
ST MARY'S ACADEMY CHARTER SCHOOL	ST MARY'S ACADEMY CHARTER SCHOOL	Recognized
STAR CHARTER SCHOOL	STAR CHARTER SCHOOL	Recognized
STEPPING STONES CHARTER EL	STEPPING STONES CHARTER EL	Recognized
TECHNOLOGY EDUCATION CHARTER HIGH	HORIZON MONTESSORI	Recognized
THE RHODES SCHOOL	THE RHODES SCHOOL	Recognized
TREETOPS SCHOOL INTERNATIONAL	TREETOPS SCHOOL INTERNATIONAL	Recognized
TWO DIMENSIONS PREPARATORY ACADEMY	TWO DIMENSIONS/VICKERY	Recognized
UNIVERSAL ACADEMY	UNIVERSAL ACADEMY - FLOWER MOUND	Recognized
VANGUARD ACADEMY	VANGUARD ACADEMY	Recognized
VARNETT CHARTER SCHOOL	VARNETT CHARTER SCHOOL	Recognized
YES PREPARATORY PUBLIC SCHOOLS	YES PREP - SOUTHWEST CAMPUS	Recognized
A+ ACADEMY	A+ ACADEMY	Academically Acceptable
ACADEMY OF ACCELERATED LEARNING IN	ACADEMY OF ACCELERATED LEARNING	Academically Acceptable
ACADEMY OF DALLAS	ACADEMY OF DALLAS	Academically Acceptable

Charter Name	Campus Name	Accountability Rating
ACCELERATED INTERMEDIATE ACADEMY	ACCELERATED INTERMEDIATE CHARTER	Academically Acceptable
AMBASSADORS PREPARATORY ACADEMY	AMBASSADORS PREPARATORY ACADEMY	Academically Acceptable
AW BROWN-FELLOWSHIP CHARTER SCHOOL	AW BROWN-FELLOWSHIP CHARTER SCHOO	Academically Acceptable
AZLEWAY CHARTER SCHOOL	AZLEWAY CHARTER SCHOOL PINE MOUNT	Academically Acceptable
BAY AREA CHARTER INC	BAY AREA CHARTER ELEMENTARY SCHOO	Academically Acceptable
BAY AREA CHARTER INC	BAY AREA CHARTER MS	Academically Acceptable
BEXAR COUNTY ACADEMY	BEXAR COUNTY ACADEMY	Academically Acceptable
BRAZOS SCHOOL FOR INQUIRY & CREATI	BSIC AUTUMN CIRCLE	Academically Acceptable
BRAZOS SCHOOL FOR INQUIRY & CREATI	BSIC HOUSTON-ROSSLYN	Academically Acceptable
BRAZOS SCHOOL FOR INQUIRY & CREATI	BSIC YORK STREET	Academically Acceptable
BRIGHT IDEAS CHARTER	BRIGHT IDEAS CHARTER	Academically Acceptable
BROOKS ACADEMY OF SCIENCE AND ENGI	BROOKS ACADEMY OF SCIENCE AND ENGI	Academically Acceptable
CALVIN NELMS CHARTER SCHOOLS	CALVIN NELMS - NORTHWEST	Academically Acceptable
CALVIN NELMS CHARTER SCHOOLS	CALVIN NELMS MIDDLE SCHOOL	Academically Acceptable
CEDARS INTERNATIONAL ACADEMY	CEDARS INTERNATIONAL ACADEMY	Academically Acceptable

Charter Name	Campus Name	Accountability Rating
CHILDREN FIRST ACADEMY OF DALLAS	CHILDREN FIRST OF DALLAS	Academically Acceptable
CORPUS CHRISTI MONTESSORI SCHOOL	CORPUS CHRISTI MONTESSORI SCHOOL	Academically Acceptable
CUMBERLAND ACADEMY	CUMBERLAND ACADEMY	Academically Acceptable
DALLAS COMMUNITY CHARTER SCHOOL	LINDSLEY PARK COMMUNITY SCHOOL	Academically Acceptable
EAGLE ACADEMIES OF TEXAS	HERITAGE CHAMPIONS ACADEMY	Academically Acceptable
EAGLE ADVANTAGE SCHOOLS	EAGLE ADVANTAGE SCHOOLS	Academically Acceptable
EDUCATION CENTER	EDUCATION CENTER AT LITTLE ELM	Academically Acceptable
EDUCATION CENTER	EDUCATION CENTER AT THE COLONY	Academically Acceptable
EDUCATION CENTER	THE EDUCATION CENTER AT DENTON	Academically Acceptable
EDUCATION CENTER	THE EDUCATION CENTER IN LEWISVILL	Academically Acceptable
EDUCATION CENTER INTERNATIONAL ACA	EDUCATION CENTER INTERNATIONAL AC	Academically Acceptable
EDUCATION CENTER INTERNATIONAL ACA	EDUCATION CENTER INTERNATIONAL AC	Academically Acceptable
ENCINO SCHOOL	ENCINO SCHOOL	Academically Acceptable
GATEWAY CHARTER ACADEMY	GATEWAY CHARTER ACADEMY -EL	Academically Acceptable
GOLDEN RULE CHARTER SCHOOL	GOLDEN RULE CHARTER SCHOOL	Academically Acceptable

Charter Name	Campus Name	Accountability Rating
HONORS ACADEMY	PINNACLE SCHOOL	Academically Acceptable
HOUSTON GATEWAY ACADEMY INC	HOUSTON GATEWAY ACADEMY	Academically Acceptable
IDEA ACADEMY	IDEA FRONTIER ACADEMY	Academically Acceptable
INSPIRED VISION ACADEMY	INSPIRED VISION	Academically Acceptable
INSPIRED VISION ACADEMY	INSPIRED VISION ACADEMY	Academically Acceptable
JUBILEE ACADEMIC CENTER	JUBILEE ACADEMIC CENTER	Academically Acceptable
KIPP INC CHARTER	KIPP NORTH FOREST LOWER SCHOOL	Academically Acceptable
KIPP SOUTHEAST HOUSTON	KIPP SUNNYSIDE SCHOOL	Academically Acceptable
KIPP SOUTHEAST HOUSTON	KIPP THIRD WARD SCHOOL	Academically Acceptable
LIFE SCHOOL	LIFE SCHOOL LANCASTER	Academically Acceptable
LIFE SCHOOL	LIFE SCHOOL OAK CLIFF	Academically Acceptable
LIFE SCHOOL	LIFE SCHOOL RED OAK	Academically Acceptable
LIGHTHOUSE CHARTER SCHOOL	LIGHTHOUSE CHARTER SCHOOL	Academically Acceptable
MEDICAL CENTER CHARTER SCHOOL	MEDICAL CENTER CHARTER SCHOOL/SOU	Academically Acceptable
MEYERPARK ELEMENTARY	MEYERPARK ELEMENTARY	Academically Acceptable

Charter Name	Campus Name	Accountability Rating
NORTH HILLS SCHOOL	SUMMIT INTERNATIONAL PREPARATORY	Academically Acceptable
NORTH HOUSTON H S FOR BUSINESS	NORTH HOUSTON MULTI-LANGUAGE ACAD	Academically Acceptable
NOVA ACADEMY	NOVA ACADEMY	Academically Acceptable
NOVA ACADEMY (SOUTHEAST)	NOVA ACADEMY (SOUTHEAST)	Academically Acceptable
NYOS CHARTER SCHOOL	NYOS CHARTER SCHOOL	Academically Acceptable
NYOS CHARTER SCHOOL	NYOS CHARTER SCHOOL INC AT GESSNE	Academically Acceptable
ODYSSEY ACADEMY INC	ODYSSEY ACADEMY INC	Academically Acceptable
PEAK PREPARATORY SCHOOL	HAMPTON PREPARATORY	Academically Acceptable
PINEYWOODS COMMUNITY ACADEMY	PINEYWOODS COMMUNITY ACADEMY HIGH	Academically Acceptable
RAUL YZAGUIRRE SCHOOL FOR SUCCESS	RAUL YZAGUIRRE SCHOOL FOR SUCCESS	Academically Acceptable
RAUL YZAGUIRRE SCHOOL FOR SUCCESS	RAUL YZAGUIRRE SCHOOL FOR SUCCESS	Academically Acceptable
RIPLEY HOUSE CHARTER SCHOOL	RIPLEY HOUSE CHARTER SCHOOL	Academically Acceptable
SAN ANTONIO PREPARATORY ACADEMY	SAN ANTONIO PREPARATORY ACADEMY	Academically Acceptable
SCHOOL OF EXCELLENCE IN EDUCATION	DR DAVID C WALKER EL	Academically Acceptable
SCHOOL OF EXCELLENCE IN EDUCATION	DR DAVID M COPELAND EL	Academically Acceptable

Charter Name	Campus Name	Accountability Rating
SCHOOL OF EXCELLENCE IN EDUCATION	DR HARMON W KELLEY ELEMENTARY	Academically Acceptable
SCHOOL OF EXCELLENCE IN EDUCATION	DR JAMES L BURCH ELEMENTARY	Academically Acceptable
SCHOOL OF EXCELLENCE IN EDUCATION	DR PAUL S SAENZ J H	Academically Acceptable
SCHOOL OF LIBERAL ARTS AND SCIENCE	SCHOOL OF LIBERAL ARTS AND SCIENC	Academically Acceptable
SOUTHWEST SCHOOL	TEXAS VIRTUAL ACADEMY AT SOUTHWES	Academically Acceptable
TEXAS EMPOWERMENT ACADEMY	TEXAS EMPOWERMENT ACADEMY	Academically Acceptable
TRINITY BASIN PREPARATORY	TRINITY BASIN PREPARATORY	Academically Acceptable
TWO DIMENSIONS PREPARATORY ACADEMY	TWO DIMENSIONS PREPARATORY ACADEM	Academically Acceptable
UNIVERSAL ACADEMY	UNIVERSAL ACADEMY	Academically Acceptable
VARNETT CHARTER SCHOOL	THE VARNETT SCHOOL - EAST	Academically Acceptable
VARNETT CHARTER SCHOOL	THE VARNETT SCHOOL - NORTHEAST	Academically Acceptable
WACO CHARTER SCHOOL	WACO CHARTER SCHOOL	Academically Acceptable
WAXAHACHIE FAITH FAMILY ACADEMY	WAXAHACHIE FAITH FAMILY ACADEMY	Academically Acceptable
WEST HOUSTON CHARTER SCHOOL	WEST HOUSTON CHARTER	Academically Acceptable
ZOE LEARNING ACADEMY	ZOE LEARNING ACAD - AMBASSADOR CA	Academically Acceptable

Charter Name	Campus Name	Accountability Rating
ZOE LEARNING ACADEMY	ZOE LEARNING ACADEMY	Academically Acceptable
ACADEMY OF BEAUMONT	ACADEMY OF BEAUMONT	Academically Unacceptable
BRAZOS SCHOOL FOR INQUIRY & CREATI	BSIC GANO STREET	Academically Unacceptable
DR M L GARZA-GONZALEZ CHARTER SCHO	DR M L GARZA-GONZALEZ CHARTER SCH	Academically Unacceptable
EHRHART SCHOOL	EHRHART SCHOOL	Academically Unacceptable
EL PASO SCHOOL OF EXCELLENCE	EL PASO SCHOOL OF EXCELLENCE	Academically Unacceptable
EL PASO SCHOOL OF EXCELLENCE	EL PASO SCHOOL OF EXCELLENCE MIDDLE	Academically Unacceptable
FAITH FAMILY ACADEMY OF OAK CLIFF	FAITH FAMILY ACADEMY OF OAK CLIFF	Academically Unacceptable
GABRIEL TAFOLLA CHARTER SCHOOL	GABRIEL TAFOLLA CHARTER SCHOOL	Academically Unacceptable
GIRLS & BOYS PREP ACADEMY	GIRLS & BOYS PREP ACADEMY	Academically Unacceptable
HONORS ACADEMY	UNIVERSITY SCHOOL	Academically Unacceptable
HOUSTON ALTERNATIVE PREPARATORY CH	HOUSTON ALTERNATIVE PREPARATORY C	Academically Unacceptable
JEAN MASSIEU ACADEMY	JEAN MASSIEU ACADEMY	Academically Unacceptable
JUBILEE ACADEMIC CENTER	OMEGA ACADEMIC CENTER	Academically Unacceptable
LA ACADEMIA DE ESTRELLAS	LA ACADEMIA DE ESTRELLAS	Academically Unacceptable

Charter Name	Campus Name	Accountability Rating
LA AMISTAD LOVE & LEARNING ACADEMY	LA AMISTAD LOVE & LEARNING ACADEM	Academically Unacceptable
LA ESCUELA DE LAS AMERICAS	ESCUELA DE LAS AMERICAS	Academically Unacceptable
METRO ACADEMY OF MATH AND SCIENCE	METRO ACADEMY OF MATH AND SCIENCE	Academically Unacceptable
NORTHWEST PREPARATORY	NORTHWEST PREPARATORY	Academically Unacceptable
PHOENIX CHARTER SCHOOL	THE PHOENIX CHARTER SCHOOL	Academically Unacceptable
POR VIDA ACADEMY	CORPUS CHRISTI ACADEMY	Academically Unacceptable
SAILL	SAILL CHARTER SCHOOL	Academically Unacceptable
SCHOOL OF EXCELLENCE IN EDUCATION	RICK HAWKINS H S	Academically Unacceptable
SOUTHWEST SCHOOL	SOUTHWEST MIDDLE SCH	Academically Unacceptable
TECHNOLOGY EDUCATION CHARTER HIGH	HORIZON MONTESSORI II	Academically Unacceptable
TEKOA ACADEMY OF ACCELERATED STUDI	TEKOA ACADEMY OF ACCELERATED STUD	Academically Unacceptable
TEXAS PREPARATORY SCHOOL	TEXAS PREPARATORY SCHOOL	Academically Unacceptable
TEXAS SERENITY ACADEMY	TEXAS SERENITY ACADEMY	Academically Unacceptable

Note. Source 2008-2009 AEIS data from the Texas Education Agency.

APPENDIX C

FUNDING COMPARISON BY STATE

State	Conventional Public School Funding	Public Charter School Funding	Charter Funding as Percentage of District Funding
National	\$10,771	\$6,585	61%
Alaska	\$12,229	\$6,022	49%
Arizona	\$8,025	\$6,075	76%
Arkansas	\$8,960	\$5,700	64%
California	\$10,264	\$7,034	69%
Colorado	\$9,285	\$6,500	70%
Connecticut	\$14,893	\$10,615	71%
Delaware	\$13,143	\$8,453	64%
D.C.	\$18,332	\$11,154	61%
Florida	\$9,542	\$6,552	69%
Georgia	\$10,113	\$6,740	67%
Hawaii	\$14,799	\$8,000	54%
Idaho	\$7,257	\$6,703	92%
Illinois	\$10,506	\$6,602	63%
Indiana	\$11,028	\$6,400	58%
Iowa	\$9,771	\$7,529	77%
Kansas	\$9,973	\$5,601	56%
Louisiana	\$10,456	\$6,926	66%
Maryland	\$12,430	\$5,651	45%
Massachusetts	\$14,782	\$10,107	68%
Michigan	\$10,900	\$7,128	65%
Minnesota	\$11,010	\$10,302	94%

Mississippi	\$8,644	\$5,229	60%
Missouri	\$9,585	\$9,515	99%
Nevada	\$8,937	\$6,291	70%
New Hampshire	\$11,753	\$4,300	37%
New Jersey	\$16,743	\$9,579	57%
New Mexico	\$9,438	\$8,000	85%
New York	\$16,800	\$12,205	73%
North Carolina	\$8,434	\$7,234	86%
Ohio	\$11,606	\$6,098	53%
Oklahoma	\$8,069	\$4,600	57%
Oregon	\$9,668	\$4,600	48%
Pennsylvania	\$12,942	\$7,802	60%
Rhode Island	\$13,279	\$11,241	85%
South Carolina	\$9,643	\$4,682	49%
Tennessee	\$7,512	\$7,067	94%
Texas	\$9,210	\$6,620	72%
Utah	\$6,802	\$4,907	72%
Virginia	\$10,672	\$6,450	60%
Wisconsin	\$11,160	\$7,996	72%
Wyoming	\$13,329	\$6,800	51%

Note. Source from *Charter School Funding* by Center of Education Reform (2008).

APPENDIX D

CHARTER SCHOOL LAW COMPARISON BY STATE

The "A" Laws	The "B" Laws	The "C" Laws	The "D" Laws	The "F" Laws
1. Minnesota	9. Colorado	23. Louisiana	34. Wyoming	40. Iowa
2. District of Columbia	10. Missouri	24. South Carolina	35. Hawaii	41. Mississippi
3. Michigan	11. New York	25. Utah	36. Alaska	
4. Arizona	12. Pennsylvania	26. Illinois	37. Kansas	
5. California	13. New Mexico	27. Texas	38. Virginia	
6. Florida	14. Massachusetts	28. Idaho	39. Rhode Island	
7. Delaware	15. Oregon	29. New Hampshire		
8. Indiana	16. Ohio	30. Arkansas		
	17. North Carolina	31. Tennessee		
	18. Georgia	32. Connecticut		
	19. Oklahoma	33. Maryland		
	20. New Jersey			
	21. Wisconsin			
	22. Nevada			

Note. Source from State-by-State Charter Law Profiles by Alison Consoletti of the Center of Education Reform (2008).

APPENDIX E
TEXAS CHARTER SCHOOL LAWS

Texas (1995; last amended in 2001)

15th weakest of the nation's 41 charter laws

General Statistics

Number of Schools Allowed	215, not including schools started by public universities
Number of Charters Operating	300
Approval Process	
Eligible Chartering Authorities	Local school board for conversions and state board of education for open-enrollments (new starts).
Eligible Applicants	For conversion charters, parents and teachers at existing public schools; for open-enrollment charters, existing public or private schools, parents, teachers, public or private institutions of higher education, nonprofit organizations, governmental entities.
Types of Charter Schools	Converted public, converted private, new starts
Appeals Process	None
Schools May Be Started Without Third Party Consent	No. Majority of teachers and a majority of parents must support for conversion charter; for open-enrollment charters, state board may require applicants to submit a petition signed by a certain number of parents in area of hold public hearings to determine support; open-enrollment charter must include a statement from school district on the impact of charter school on district's enrollment and financial status.
Recipient of Charter	Chief operating officer of charter school
Term of Initial Charter	Specified in charter, usually 5 years
Operations	
Automatic Waiver from Most State and District Education Laws, Regulations, and Policies	Limited; exemptions determined by commissioner
Legal Autonomy	No
Governance	Governing board is restricted to individuals with no substantial interest in a management company. The commissioner will issue rules regarding training of governing board members.
Charter School May be Managed or Operated by a For-Profit Organization	Charters may not be granted directly to for-profit organizations, but the schools may contract with them for services.

Transportation for Students	Neither regular public schools nor charter schools are required to provide transportation for students, though many do.
Facilities Assistance	Nonprofit corporation established to issue bonds in order to finance construction, renovations, and maintenance of open-enrollment charter schools.
Reporting Requirements	Charters must participate in state's general public-school reporting system (PEIMS); Commissioner shall designate an impartial annual evaluation of open-enrollment charter schools.
Funding	
Amount	State funds are guaranteed; local revenue is determined based on statewide averages. Estimated portion is about \$6,620.
Path	Funds pass through districts to charter schools authorized by local school boards; from state to open-enrollment charter schools.
Fiscal Autonomy	Limited
Start-up Funds	Federal funds available
Teachers	
Collective Bargaining / District Work Rules	Teachers at conversions remain part of district; teachers at open-enrollments work independently.
Certification	Not required
Leave of Absence from District	For conversions, no leave of absence necessary (charter school teachers remain employees of district).
Retirement Benefits	Charter schools must participate in the state's retirement system.
Students	
Eligible Students	Students in geographic area specified in charter
Preference for Enrollment	District residents if local charter
Enrollment Requirements	None
Selection Method (in case of over-enrollment)	Not addressed
At-Risk Provisions	None
Accountability	Charters must participate in statewide testing system in which scores are publicly reported to state.

Note. Source from *Texas Charter Law* by Center of Education Reform (2008).

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