

**An Examination of WIDA ACCESS Scores of English Language Learners in Charter and
Traditional Public Schools Settings: A Quantitative Study**

Charles Edward Gibson Jr.

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Charles Edward Gibson Jr.

Approved by:

Dissertation Chair: Sarah Everts, PhD

Committee Member: Anthony Bretti, EdD

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Abstract

Charter schools have become the fastest-growing school in the United States. While the popularity of charters grew, an increased student population of English language learners enrolled in public schools. The problem was not knowing if there is a difference between English language learner performance in traditional public schools and charter schools in a large metropolitan school district in the Southeast. The purpose of the quantitative, ex post facto study was to investigate academic performance among ELLs to determine whether statistically significant differences existed between participation in charter and traditional public schools and between elementary, middle, and high school levels through a review of World-Class Instructional Design and Assessment (WIDA), Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS) scores for 20 charter schools and 20 traditional public schools in a large metropolitan southeastern school district. Rational choice theory and contingency theory of leadership were used to guide this study. Research questions were used to investigate statistically significant differences in academic performance using two-way ANOVA. School-level WIDA ACCESS measures from 2017 were collected for kindergarten through 12th grade. The sample consisted of 1161 charters and 3499 traditional public schools within the same school district. Using WIDA ACCESS, a quantitative, ex post facto research design using two-way ANOVA in SPSS was used to analyze the valid test scores of English language learners who met the exit criteria for the 2017 academic year. An absence of differences in charter and traditional public-school performance implies that the selected school district in the Southeast should focus on policy revision and funding allocation to strengthen school choice options using similar strategies that provide supplemental resources.

Keywords: English language learner, school choice, charter school

Dedication

This dissertation is dedicated to GOD and my family. The Lord Jesus Christ is my provider and protector. My wife who supported me through this process by providing me with encouragement when the journey became difficult. My daughter for giving me the inspiration to finish this doctoral journey to lead by example. I also thank my mom and dad for their support.

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Chapter 1: Introduction

Charter schools in the past couple of decades have become the fastest-growing school choice option within the public school system in the United States and one of the most debated topics in education (Sahin et al., 2017). Between 2000 and 2015, charter school student enrollment grew from 400,000 to 2.9 million across 42 states (Sahin et al., 2017; Teresa & Good, 2018). Within the public school system, English language learners (ELLs) are the fastest-growing student population, constituting 9% of the student population in the United States. Language minority (LM) students are projected to be 40% of the school-age population by 2030 (Besterman et al., 2018; National Center for Education Statistics, 2019).

Charter schools are independently run public schools, which are exempt from many of the regulations of traditional public schools but come with an increased level of accountability (Anderson, 2017). According to research, charter schools were started to narrow achievement gaps, which started with improving achievement test scores (Cheng et al., 2017). Although several studies exist regarding charter school performance, the literature displayed a larger gap in studies evaluating ELL performance in charters as a school choice in comparison with traditional public schools (DeAngelis, 2018; Flanders, 2017; Kalulu et al., 2017; Maranto & Vasile, 2018; Mavrogordato & Harris, 2017; Sahin et al., 2017; Shin et al., 2017; Winters et al., 2017). Garcia and Morales (2016) expressed a need to contribute future research addressing the literature gap regarding ELLs' school choice and education opportunities in charter schools. Future research would provide parents and students with information regarding school choice options along with a piece of scholarly literature to fill the gap.

An introduction of the research study is provided in Chapter 1, which examines the topic of school choice for English language learners in charter schools and traditional public schools. The chapter provides the background of the problem, the statement of the problem, the purpose of the study, and the study's significance. Research questions, research hypotheses, and theoretical framework are introduced in Chapter 1, along with definitions of terms, assumptions, scope and delimitations, and limitations. Chapter 1 concludes with a summary.

Background of the Problem

School choice has become a mainstream and controversial issue in public education (Rapa et al., 2018). Educational choice's historical beginnings can be traced to the start of civil society in the United States of America (Logan, 2018). Parents who deemed education important for their children selected a school that best fit affordability, availability, location, and religious preference (Logan, 2018).

Following the landmark *Brown v. Board of Education* court decision in 1954, the notion of *separate, but equal* was struck down by the U. S. Supreme Court (Heilig et al., 2016; Nelson, 2017). The Supreme Court decision made school choice an even more contested topic for parents seeking better educational opportunities for their children (Heilig et al., 2016). In 1992, the first charter school was opened in Minnesota (Anderson, 2017). Charter schools, which are public schools that are exempt from several rules and regulations which the traditional public-school system follows, provide parents with an additional school choice option (Anderson, 2017).

While the popularity of charter schools as a school choice option expanded, an increased student population of English language learners enrolled in the public education system in the United States (Besterman et al., 2018). English language learners are students who speak a

language other than English or come from an environment where English is not the dominant spoken language (Marsh, 2018). Marsh (2018) projected by 2030, 40% of the public education system would be comprised of students classified as ELLs or language minority (LM) students. Despite the acknowledgment of statistical trends displaying an influx of ELLs and charters becoming a popular school choice option, little literature has given attention to the convergence of the two trends (Garcia & Morales, 2016).

According to Linick (2016), most research into charter schools compares performance with district-operated public schools. In the literature, Linick noted mixed results were displayed in comparing the charter school choice option to traditional public schools (Arsen & Ni, 2012; Bettinger, 2005; Bifulco & Ladd, 2006; Booker et al., 2008; Hoxby, 2003; Sass, 2006, as cited in Linick, 2016). Although several studies compare charter schools to traditional public schools, there is a distinct lack of studies comparing ELL performance within the two available public-school choice options (Garcia & Morales, 2016; Garcia & Morales, 2016a). Shin et al. (2017) alluded to the question of whether charter schools provide better learning to students than traditional public schools. The question presented by Shin et al. and the concerns over the lack of studies addressing the performance of ELLs in charters as a school choice option need to be studied to provide parents and students with information regarding which is the better option.

Statement of the Problem

The problem was not knowing if there was a difference between ELL performance in traditional public schools and charter schools in a large metropolitan school district in the Southeast. A considerable amount of research has been presented across several states and regions to support the notion of charter schools outperforming public schools (Flanders, 2017;

Kalulu et al., 2017; Sahin et al., 2017). Some studies have indicated the performance of charter schools is either neutral or worse than traditional public schools (Orfield & Luce, 2016; Winters et al., 2017). Although studies evaluating the relationship between charter schools and traditional public school academic performance to provide students and parents with information surrounding school choice have been performed throughout various states (Flanders, 2017; Kalulu et al., 2017; Orfield & Luce, 2016; Sahin et al., 2017; Winters et al., 2017), there is a gap in the literature on the relationship which exists in ELL student performance in charter schools and traditional public schools within the selected large metropolitan school district in the Southeast (Garcia & Morales, 2016).

Purpose of the Study

The purpose of the quantitative, ex post facto study was to investigate academic performance among ELLs to determine whether statistically significant differences existed between participation in charter and traditional public schools and between elementary, middle, and high school levels through a review of World-Class Instructional Design and Assessment (WIDA) ACCESS scores for 20 charter schools and 20 traditional public schools in a large metropolitan Southeastern school district. The quantitative ex post facto study was needed to provide parents and students with information regarding school choice. Results from the quantitative, ex post facto study may be used to address the lack of research examining charter schools as an alternative school choice for the fast-growing ELL population.

Significance of the Study

In the United States, ELLs are the fastest-growing student population (Besterman et al., 2018). The most popular and debated school choice option in the United States are charters

(Sahin et al., 2017). Garcia and Morales (2016) called for contributions to future research to address the literature gap regarding school choice. Results of the quantitative, ex post facto study were used to address the lack of research to examine the relationship of charter schools being an alternative school choice for the fast-growing ELL population. The study provided parents and students with information regarding school choice options, along with a piece of scholarly literature to fill the gap. The quantitative, ex post facto study findings can be used to influence policymakers to improve educational opportunities for ELLs and promote positive social change.

Research Questions

Research questions are used to form a strong research study (Ratan et al., 2019). The questions are used to identify the problem, guide the methodology and lead to the development of a hypothesis. The following questions guided the research study:

Research Question 1: What is the statistically significant difference in ELL academic performance by participation in charter and traditional public schools?

Research Question 2: What is the statistically significant difference in ELL academic performance by school level in charter and traditional public schools?

Research Question 3: Does an interaction effect of participation and school level exist in WIDA ACCESS scores for ELL students?

Hypotheses

The hypotheses in scientific-based research are statements regarding expected relationships between dependent and independent variables (Kaur, 2017). There is no relationship between the dependent and independent variables regarding the null hypothesis (Kaur, 2017). The following hypotheses were used to test for statistically significant differences:

H1_o: No statistically significant difference exists in WIDA ACCESS scores of ELL students attending charter and traditional public schools.

H1_a: A statistically significant difference exists in WIDA ACCESS scores of ELL students attending charter and traditional public schools.

H2_o: No statistically significant difference exists in WIDA ACCESS scores for ELL students between elementary, middle, and high school levels.

H2_a: A statistically significant difference exists in WIDA ACCESS scores for ELL students between elementary, middle, and high school levels.

H3_o: No interaction effect of participation in charter and traditional public schools and elementary, middle, and high school levels exists in WIDA ACCESS scores for ELL students.

H3_a: An interaction effect of participation in charter and traditional public schools and elementary, middle, and high school levels exists in WIDA ACCESS scores for ELL students.

Details of the research design and rationale are justified within the following text.

Research procedures and data analysis are sequenced. Reliability, validity, and ethical procedures with insights from research experts conclude the research plan.

Theoretical Framework

A theoretical framework guides the course of the research, grounds the analysis in theoretical conception, and establishes credibility (Adom et al., 2018). The quantitative, ex post facto study to address the research questions was guided using rational choice theory and the contingency theory of leadership (Amanchukwu et al., 2015; Scholtz, 2015). The structure

provided by the theoretical framework demonstrates the way the research study is defined philosophically, epistemologically, analytically, and methodologically (Adom et al., 2018).

Contingency theory is the idea supporting the type of leadership used in a specific situation based on specific environment variables (Khan & Nawaz, 2016). Within the study evaluating ELL performance, the contingency theories of leadership environmental variables for ELL evaluation are ELLs in traditional public schools and charter schools. Contingency theories also use contingency factors. The thoughts by Amanchukwu et al. (2015) provided theoretical support to the quantitative, ex post facto study regarding school choice for ELLs by rendering support and providing a multi-year analysis to assess the best learning platform for ELLs in a large, urban school district in the Southeast.

Rational choice theory (RCT) is explained by Scholtz (2015) as a description of choices that are considered rational. RCT is a plausible option used in quantitative comparative studies because RCT evaluates quantitative data on a large scale while explaining theoretical narratives for statistical symmetricalness. A parametric approach for analysis was used in the ex post facto study of academic performance of ELL students in charter and traditional public schools. This approach concurs with the recommendations and view of Scholtz expressing a statistical test to evaluate the two education approaches for comparison is a credible course of action to provide students and parents with the conclusion needed to make a rational choice regarding school options.

Definitions of Terms

The following terms are used throughout the research study when examining student performance scores. Common terms have been excluded from the study. The definitions of terms include two independent variables (participation and school level) and a dependent variable (ELL performance on the WIDA ACCESS English language assessment instrument).

Participation has two categories (charter school and traditional public school). The student-level independent variable has three categories (elementary school, middle school, and high school).

Academic performance is defined as a student's average grade (Martin Sanz et al. 2017). For this research, academic performance is defined as ELL student scores on the WIDA ACCESS English language proficiency assessment.

Achievement gap is defined as a disparity which occurs when one group of students performs statistically significantly different than the other group (larger than the margin of error) (Hines et al., 2016).

Charter school is defined as a public education school that receives a contract or charter from a public entity, such as public universities or local and state boards (Hinojosa, 2009, as cited in Sahin et al., 2018).

Contingency theory is a leadership theory that contends no specific leadership approach applies to all areas but is contingent on certain circumstances (Khan & Nawaz, 2016).

Elementary school is defined as a school that serves students who are in kindergarten through fifth grade (Bear et al., 2017).

High school is defined as a school that serves students who are in ninth through twelfth grade (Bear et al., 2017).

Middle school is defined as a school that serves students who are in sixth through eighth grade (Bear et al., 2017).

Participation is defined as empowering individuals to assemble their capacities and control their activities and decisions that affect their lives through becoming social actors. (Mubita et al., 2017.). For this research, the operational definition of participation is the school type or charter or traditional public school for each ELL as recorded in secondary records.

Rational choice theory is defined as a choice which denotes an understanding of social trends resulting from individual action, through the view of every action being viewed as a choice, in a counterfactual viewpoint of its possible alternatives (Scholtz, 2015).

School-level is defined as variables which are related to the school (Oldac & Kondakci, 2020). For this research, school-level is operationally defined as the elementary, middle, and high school level recorded in secondary records for each ELL.

Traditional public school is defined as a school that is publicly funded (Hussar et al., 2020)

World-Class Instructional Design and Assessment (WIDA) ACCESS is an annual examination taken by English language learners in kindergarten through 12th grade, which measures proficiency in the English language (WIDA ACCESS for ELLs, 2018).

Assumptions

The following assumptions about the quantitative, ex post facto study were made. WIDA ACCESS descriptive statistical data, available on the selected school district's website, accurately reflects student performance for the 2017 academic year. Student performance score data were collected following ethical procedures, accurately displaying statistical data by grade

level and school type. The purposive sample of WIDA ACCESS data for the charters and traditional public school performance scores were homogeneous.

WIDA ACCESS examination scores (dependent variable) can be measured at a continuous level (Two-way ANOVA in SPSS statistics, 2018). Participation and school levels consisted of two or more categorical, independent groups. The ex post facto study included independence of observation (Two-way ANOVA in SPSS statistics, 2018). No significant outliers existed in the nonrandom purposive sample. Approximate normal distribution existed between the WIDA ACCESS examination scores and among each group of participation and school level independent variables. Homogeneity of variance existed between each group combination within the two independent variables (Two-way ANOVA in SPSS statistics, 2018). WIDA ACCESS data collected for the selected charter schools and public schools in the Southeastern school district did not include any personally identifiable information. The data were assumed to be accurate and correct.

Scope and Delimitations

The scope of the study involved evaluating ELL student performance in charter schools and traditional public schools on the WIDA examination among elementary, middle, and high school students in a large metropolitan school district in the Southeast. Theofanidis and Fountouki (2018) explained delimitations as boundaries the investigator places on themselves to keep the research study from being unworkable. In the quantitative, ex post facto study, determining the research participants was a key boundary to ensure alignment between the selected population groups, geographical locations, and academic categorization (Etikan, et al., 2016; Theofanidis & Fountouki, 2018; Wansink & Van Ittersum, 2016). Only charter schools

and traditional public schools located in the selected metropolitan school district in the Southeast were selected for the quantitative, ex post facto study, instead of the entire state which consists of 95 counties. Setting a boundary to analyze statistical data published as public information for the two student groups from traditional public and charter schools in a specific geographical location minimized research bias (Scroggins et al., 2016).

Limitations

Experts describe limitations as imposed restrictions, which are beyond the researcher's power (Theofanidis & Fountouki, 2018). The results from the study will not be able to be used to imply the same results to all ELLs learning in charters and traditional public schools throughout the United States. Limitations, or potential weaknesses in the study, can be research design and statistical models (Alpman, 2016).

The quantitative, ex post facto study had limitations. An initial limitation involved the availability of statistical data surrounding the school selection for the quantitative, ex post facto study (WIDA ACCESS for ELLs, 2018). Available data excluded ELL performance in magnet, non-traditional, and alternative schools in the selected Southeastern metropolitan district.

The second limitation surrounded the statistical model, which influenced the analysis of the study (Upendra et al., 2017). Alpman (2016) expressed the importance of statistical matching being an incredibly useful tool in exploring relationships among sets of variables. To protect student identity, only performance score data regarding ELL performance on the WIDA assessment were retrieved to develop the sample. The limitation minimized the selection of statistical models to the two-way ANOVA, which could be used to determine if there was a statistically significant difference between ELL performance in charter schools and traditional

public schools (Mishra et al., 2019). The limitation played a role in the selection of the two-way ANOVA being selected to determine whether there was a statistically significant difference between the variables in the study (Mishra et al., 2019).

Etikan et al. (2016) expressed outliers involved in nonprobability sampling and self-selections can create an issue in purposive sampling. A third limitation was the use of purposive sampling, which was used to represent the ELL student populations, along with the charter and traditional public-school types in the ex post facto study. To promote validity, strict inclusion criteria were employed, using school type, grade level, and proximity (Etikan et al., 2016).

A fourth limitation was the use of archival data. Barnes et al. (2018) expressed limitations of archival data are associated with archival methodology. Limitations with using archival data and research studies are associated with measurement in construct validity (Barnes et al., 2018). The ex post facto study used archival data to test for a significant differences in academic performance between English language learners enrolled in charter schools and public schools using archival records data from the school district's website, as these data were what has been made available for research and analysis purposes among the public (Data downloads & request, 2019).

Unequal participation sizes was a fifth limitation to the ex post facto study. A purposive sample of WIDA ACCESS examination data from charters and traditional public schools in the select large metropolitan district in the Southeast displayed an inequivalence of participation. Multach and Wilcox (2017) suggested that uneven samples increase the risk of Type I error through heteroscedasticity. Since the purposive sample of target school populations had unequal participation in the WIDA ACCESS examination, this was a limitation that must be considered.

Chapter Summary

Further research to test ELL student performance in charter schools and traditional public schools was needed to provide parents and children with the best school choice options (Garcia & Morales, 2016). An introduction, background of the problem, statement of the problem, the purpose of the study, and significance of the study are provided in Chapter 1. The three research questions and hypotheses to test ELL performance in charters and traditional public schools for any statistically significant differences are followed by the establishment of a theoretical framework. A theoretical framework was developed using contingency theories and rational choice theory (Khan & Nawaz, 2016; Scholtz, 2015).

The definition of terms is provided in Chapter 1. Definitions include a description of charter schools, which are public education schools in receipt of a contract or charter from a public entity, such as public universities or local and state boards (Hinojosa, 2009, as cited in Sahin et al., 2018). Assumptions made by the scholar are included in the chapter, along with scope and delimitations and limitations. An in-depth expansion of the study's theoretical framework and extensive examination of literature supporting the justification for the study and highlighting the gap in the literature are provided in Chapter 2.

Chapter 2: Literature Review

The purpose of the quantitative, ex post facto study was to investigate academic performance among ELLs to determine whether statistically significant differences existed between participation in charter and traditional public schools and between elementary, middle, and high school levels through a review of World-Class Instructional Design and Assessment (WIDA) ACCESS scores for 20 charter schools and 20 traditional public schools in a large metropolitan southeastern school district. The quantitative ex post facto study was needed to provide parents and students with information regarding school choice. A quantitative, ex post facto study was used to address the lack of research to examine the relationship of charter schools being an alternative school choice for the fast-growing ELL population. A review of the literature displayed limited research regarding studies evaluating charter school performance as a school choice in comparison to traditional public schools (Kalulu, et al., 2017; Maranto & Vasile, 2018; Mavrogordato & Harris, 2017). In particular, the literature displayed fewer studies evaluating ELL academic performance in charters than in traditional public schools.

In Chapter 2, the literature review strategy is explained. Following the literature review strategy, the theoretical framework for the research study is described. A research literature review evaluating scholarly literature regarding ELLs and school choice and the charter option is synthesized to provide an in-depth synopsis, streamlining the relevance of school choice and the absence of research regarding ELL performance in charters. The literature review concludes with a summary.

Literature Search Strategy

American College of Education library was the main source used to review scholarly

literature. The American College of Education database provided a platform to select academic, peer-reviewed journals and articles. Google Scholar was an alternative source to retrieve literature relevant to the research topic. The following key terms were used to research peer-reviewed journals and articles within the chapter: *English Language Learner (ELL)*, *Traditional Public Schools (TPS)*, *Charter Schools (CS)*, *School Choice*, *Standardized Testing*, *Achievement Gaps*, *Rational Choice Theory (RCT)*, *Contingency Theories of Leadership*, *Education Reform*, *Education Policy*, *Education Legislation*, *School Funding*.

Theoretical Framework

The theoretical framework guiding the course of the research grounds the analysis in theoretical conception and establishes credibility (Adom et al., 2018). The quantitative, ex post facto study to address the research questions was guided using rational choice theory and contingency theories of leadership (Amanchukwu et al., 2015; Scholtz, 2015). The structure provided by the theoretical framework demonstrates the way the research study is defined philosophically, epistemologically, analytically, and methodologically (Adom et al., 2018).

Rational Choice Theory

Among the essential schools of intellection in comparative research is the rational choice theory (RCT) (Scholtz, 2015). Wang et al. (2019) suggested RCT as being nearly the most essential theory used and is commonly referred to as rational action theory. Rational choice theory (RCT) describes choices, which are considered rational (Scholtz, 2015). The term rational choice is used to address two accompanying intellectual provocations. Choice is understood as knowing a social phenomenon of each action, and each action is viewed as a choice through a

counter-factual aspect in place of the additional options. The term rational regarding choice is deriving a decision from actor characteristics different than the actor (Scholtz, 2015).

History of Rational Choice Theories in Education and Quantitative Research

Kliemt (2018) explained rational choice theory (RCT) has existed since the mid-20th century. RCT used chronological steps to address creative provocations which date back to 1957 (Scholtz, 2015). Studies using RCT in 1957 were initially implemented to address discrimination and diffusion. Wang et al. (2019) noted RCT as having a long-arm historical background, which provides individuals facing a decision alternative. Through the lens of education and quantitative comparative studies, RCT became more relative by implementing two significant contributions, Becker's human capital and Coleman's introduction to mathematical sociology (Scholtz, 2015). Becker's human capital understood education in the sense of capital accumulation (Scholtz, 2015). Coleman's introduction to mathematical sociology expressed using mathematics as a useful approach (Raub & Voss, 2017; Scholtz, 2015).

Scholtz (2015) explained how Coleman continued demonstrating the significance of RCT to education in a report written and published in the late 1960s. In that report, the author used RCT to bring attention to equality and educational opportunities (Scholtz, 2015). Attention to equality and educational opportunities expressed by Scholtz in the Coleman Report in the late 1960s align with the more recent findings of Polat et al. (2016), expressing achievement gaps between ELLs and non-ELL students are an issue that requires more attention from education researchers.

RCT is a plausible option used in quantitative comparative studies (Dekker, 2017; Wang et al., 2019). One aspect in which RCT can be used is to evaluate relationships between

education systems and educational attainment (Scholtz, 2015). Evaluating the performance differences in ELLs through comparison performance in charter schools and traditional public schools follows closely with Scholtz's views on comparative education. RCT is used to evaluate quantitative data on a large scale while explaining theoretical narratives for statistical symmetricalness (Scholtz, 2015). The ex post facto of the academic performance of ELL students in traditional public schools and charter schools opted to use a quantitative, ex post facto approach for analysis. This concurs with the recommendations and view of Scholtz expressing a statistical test to gauge the two education systems for comparison of statistically significant differences, which is a credible course of action to provide students and parents with the conclusion needed to make a rational choice regarding school options.

The Macro-Micro Scheme

The macro-micro scheme was initially introduced into the RCT theories tradition by Lindenberg in 1977 and later communicated to a larger audience by Coleman in 1986 (Scholtz, 2015). Raub and Voss (2017) elaborated on the importance and percussion of the macro-micro scheme mentioned by Scholtz, explaining Coleman's diagram as the best-known contribution to social theory. Micro in Coleman's micro-macro schema refers to an individual, and macro refers to a collective (Raub & Voss, 2017). The scheme of sociological explanations expresses macro-conditions as having a direct link to macro-outcomes through taking micro-conditions and micro-outcomes into consideration.

In comparative education, the macro-conditions are the school choice option of traditional public schools or charter schools, and the macro-outcome would be statistical support demonstrating ELL performance (Mavrogordato & Harris, 2017). The macro-micro scheme in a

sociological aspect is a science that seeks the interpretative discernment of social action to come to a casual explanation and outcome (Scholtz, 2015). In conjunction with school choice, the social action allows parents and students classified as ELLs to choose between charter schools and traditional public schools through the causal explanation of statistical evidence supporting whether charter schools outperform, underperform, or perform similarly to traditional public schools (Scholtz, 2015).

Game Theory

Game theory examines mathematical models of conflict and practice between a group of rational decision-makers (Marden & Shamma, 2018). Game theory is another RCT, where the decision of one's actions depends on three aspects. An initial aspect is the strategies accessible to the individual (Scholtz, 2015). The second aspect of game theory is the potential payoffs affiliated with individualist actions (Scholtz, 2015). Scholtz (2015) explained the last aspect of the individual is the expectations about the individual decisions of others.

Garcia and Morales (2016) expressed the amount of both charter schools in the United States and ELL enrollment in the public education systems has been persistently increasing. Increases in both areas align with the first aspect of game theory because charter schools are becoming more accessible to ELLs in the context of school choice (Garcia & Morales, 2016a; Scholtz, 2015). Individual students can access education through one of two individual school choice options, a charter school, or a traditional public school (Rapa et al., 2018).

Long (2018) verbalized policymakers and parents to view school choice as a solution to the problematic performance of traditional public schools. Long expressed school choice is motivated by the notion of providing quality instruction, giving parents the authority to decide

the best option for their children and to inspire enhancements to the traditional public schools contending for students to attend educational facilities. The second aspect of game theory is motivation or potential pay-off of the action of an individual (Samuelson, 2016; Scholtz, 2015). In a theoretical context, the potential pay-off to ELL students and parents in the context of school choice would be the selection of an educational facility that provides the best opportunities and platform for academic success (Samuelson, 2016). The last aspect of game theory is the expectations of the decision (Scholtz, 2015). An expectation of parents and students is for ELLs to have a maximized opportunity at better academic achievement through school choice (Garcia & Morales, 2016).

A choice of a specified act resides in the way an individual situation is presented (Dekker, 2017). Choices are broken down into three descriptions (Scholtz, 2015). The first description is the options are compared, and the available options can be summed up as the initial features of the actor (Scholtz, 2015). Comparison in the study is centered on school choice, and the options for ELLs are traditional public schools or charter schools (Rapa et al., 2018). The second description is how the options are being compared (Scholtz, 2015). Traditional public schools and charter schools are being compared using two-way ANOVA, after being matched by locational factors and socioeconomic data (Mishra et al., 2019). A final description is what the actors believe regarding the probabilities of the different states (Scholtz, 2015). The study is designed to address the description presented by Scholtz by providing research-based insight into the unexplored gap in the literature about the performance differences which exist between ELLs in traditional public schools and charter schools.

Rational Choice Theory Sustainability

RCT is a credible approach that has been used in education comparative analysis (Marshall, 2017). A considerable number of studies (Boyd, 1994, as cited in Marshall, 2017 and Smith, 2003), explained RCT and democratic schooling present essential arguments regarding the existence of school choice. Marshall (2017) expressed RCT was among the two main theoretical lines in problematizing charter schools.

RCT has survived and stood the test of time in surviving competitive theories by being reliable (Scholtz, 2015). RCT is a relevant option used to form and analyze a quantifiable optimization problem using mathematical tools (Scholtz, 2015). RCT provides a reduction in complexity (Scholtz, 2015). Reductions are a result of implementing the distinct advantage formal theories hold for presenting solutions to complex, well-formulated problems (Scholtz, 2015). Given the reliability of the theory and the description provided, the theory is a plausible option to compare quantitative data (Wang et al., 2019). RCT is the selected theory used to guide the research study to address the literature gap of ELL performance in traditional public schools and charter schools in a southeastern school district (Wang et al., 2019).

Contingency Theories of Leadership

Contingency theories contend there is not one stand-alone style of leadership (Khan & Nawaz, 2016; Suleiman et al., 2018). Khan and Nawaz expressed with contingency theories, there is no one specific way to lead. The leadership style adopted by the leader is conditioned on the internal and external dimensions of the setting (Khan & Nawaz, 2016). Leadership styles used in contingency theories rely upon several variables, which include the situation and quality (Khan & Nawaz, 2016).

Contingency theories of leadership is a situational leadership model with a history which extends back to 1951 (Fiedler, 2015). The situational leadership model theorized the ideology that for a leader to be successful in a field, the leader can adapt leadership styles to each presented situation (Vidal et al., 2017). In addition to the adaptation of situational leadership styles, a leader can transform the leadership type between relationship-oriented and task-oriented (Khan & Nawaz, 2016).

Furthermore, contingency theories of leadership are an extension of trait theory (Khan & Nawaz, 2016). Trait theory aligns with the conception of contingency theories of leadership, wherein the traits of an individual are situational (Aalateeg, 2017). Situational trait variables are taken into consideration by the way the leader exercises leadership authority (Khan & Nawaz, 2016). Traits of charter schools and traditional public schools from a theoretical stance about trait theory would have a direct impact on student performance among ELLs (Aalateeg, 2017).

Through the lens of school choice, contingency theories of leadership align with education options for ELLs. Amanchukwu et al. (2015) expressed the notion, explaining no specific leadership style is tailored to every situation or environment. Charter schools and traditional public schools provide two separate environments for ELLs to obtain an education through public educational facilities (Kalulu et al., 2017). School choices for ELLs present two different settings, where education is provided using two different educational environments (Rapa et al., 2018).

Khan and Nawaz (2016) explained with contingency theories, an individual performs best when a situation arises. The comments of Khan and Nawaz concur with the observations of Suleiman et al. (2018), which expressed there is not the best approach to leading a company, but

the leadership style would be contingent on the situation. Statements regarding situational performance align with the notion that, theoretically, ELLs will perform better in an environment where the situational variables, charter school or traditional public school, are favorable to support the learner (Khan & Nawaz, 2016).

Contingency theories use contingency factors (Amanchukwu et al., 2015). Contingency factors support the notion that any conditions in a relevant environment are considered when designing an organization (Amanchukwu et al., 2015). Aalateeg (2017) expressed contingency theories have exhibited success in distinguishing relationships between group performance and leadership patterns. These thoughts by Amanchukwu et al. provide theoretical support to the quantitative, ex post facto regarding school choice for ELLs by rendering support and providing statistical analysis to assess the best learning platform for ELLs in a large, urban school district in the Southeast.

Research Literature Review

A review of the literature provided a plethora of studies regarding the presence of ELLs in the United States (De Costa & Qin, 2016; Gándara & Escamilla, 2017; Garcia & Morales, 2016a; Marsh, 2018). The literature expressed ELLs are the fastest-growing student population (Artigliere, 2019; Garcia & Morales, 2016; Garcia & Morales, 2016a; Marsh, 2018; Mavrogordato & Harris, 2017). A review of literature provided a detailed overview describing charters as the fastest growing alternatives to traditional public schools as a school choice option, with an evaluation of literature thoroughly assessing charter school performance and characteristics (Anderson, 2017; Barnard-Brak et al., 2018; Cohodes, 2018; Gilblom & Sang, 2019; Heilig et al., 2019; Ladner, 2018; Sahin et al., 2017). There were a plethora of studies

investigating school choice in a historical context (Barnard-Brak et al., 2018; Doughty, 2016; Eastman et al., 2017; Logan, 2018; Long, 2018; Nelson, 2017; Zinskie & Rea, 2016) and theoretical perspective (DeAngelis, 2018; Frankenberg et al., 2017; Gilblom & Sang, 2019; Teasley, 2017). Although the literature displayed studies noting the constant historical change regarding the fast-growing ELL population, there is a gap in the literature evaluating how the fastest-growing ELL student population performs in charters as a school choice option (Mavrogordato & Harris, 2017).

English Language Learners

English language learner (ELL) is defined as an individual who is born in a country outside of the United States or in the United States but has a home language that is not English (Marsh, 2018). In the public education system in the United States, students are classified as ELLs following the student's assessment for proficiency in the English language (Marsh, 2018). Although most ELLs in the United States are native Spanish speakers, there are over four hundred languages spoken by ELLs across the United States (Marsh, 2018). Artigliere (2019) provided literature that supported the notion of Marsh (2018), which expressed ELLs speak a large variety of languages in the United States. The research journal provided statistical insight displaying in the United States over 150 languages are spoken.

ELLs a Rising Population in the United States

A plethora of sources provided direct, undisputed descriptive statistical support reflecting a fast-growing population of ELLs in the United States of America (Artigliere, 2019; Garcia & Morales, 2016; Garcia & Morales, 2016a; Marsh, 2018; Mavrogordato & Harris, 2017). U.S. Census data from the National Center for Education Statistics showed 10% of the public

education system in the United States is made up of ELLs (Artigliere, 2019). Marsh (2018) stated in the history of public education, ELLs are the fastest-growing group of students. There are 4.6 million ELLs in the education system, making up 9.4% of the student population (Marsh, 2018). The rapidly growing ELL population is projected to account for approximately 40% of students by 2030, which has tripled over the past 30 years (Marsh, 2018).

Similar statistics cited in Artigliere (2019) and Marsh (2018) expressed the need to educate ELLs due to the fast growth of the student population in the United States (Mavrogordato & Harris, 2017). The research journal noted a 7.3% increase in the ELL population from 2002 - 2011 as presented by the National Center for Education Statistics (Mavrogordato & Harris, 2017). In addition to the 7.3% increase in the ELL population over the 9 years, there was a 14.1% increase throughout urban areas of the country (Mavrogordato & Harris, 2017). Garcia and Morales (2016) noted similar statistics as Mavrogordato and Harris from the National Center for Education Statistics, which suggested a 14.4% increase in the ELL population between 2001-2012 and the 2011-2012 academic years.

The body of literature expressed although there is a statistical trend of a rising ELL population throughout the United States, some states are experiencing substantially higher numbers of ELL students enrolling in the public education system (Santibanez & Snyder, 2018). In South Carolina, there was a 500% increase in the ELL student population between the 2001-2002 and 2011-2012 academic years (Garcia & Morales, 2016). Furthermore, literature noted during 2001-2002 through 2011-2012, Texas, California, and Florida had a higher influx of ELLs than other states throughout the nation (Garacia & Morales, 2016).

History of English Language Learners & Bilingualism in the United States

The literature displayed a documented direct historical connection between ELLs in the United States, legislation, and a past landscape of incorporating bilingualism (Artigliere, 2019; De Costa & Qin, 2016; Gándara & Escamilla, 2017; Garcia & Morales, 2016a; Marsh, 2018). Gándara and Escamilla (2017) explained immigrant populations, economy, and political changes have created a shift between tolerance and repression on language minorities. Although the United States was founded as a nation of immigrants, there has been a historically documented uncomfortable association between immigrants and the immigrant's cultural languages (Gándara & Escamilla, 2017).

Throughout the 18th century in the United States, many of the new European settlers spoke a variety of languages, including Dutch, French, and German (Gándara & Escamilla, 2017). Among the languages, German was the language widely spoken (Driever & Bagheri, 2018). In 1751, President Benjamin Franklin expressed in a few years, Pennsylvania could essentially be a German colony (Gándara & Escamilla, 2017; Warde, 2017).

German was a heavily spoken language by the settlers (Driever & Bagheri, 2018). By 1859, German bilingual schools throughout the Midwest started to flourish (Gándara & Escamilla, 2017). According to Gándara and Escamilla, Ohio adopted the country's first set of bilingual education laws in 1839. Laws implemented by states allowed for German-English instruction to be taught in the classroom (Gándara & Escamilla, 2017). Other states followed the model Ohio set, allowing bilingual instruction for other diverse languages spoken within the United States (Driever & Bagheri, 2018). In 1847, Louisiana imposed a similar proviso, allowing for English-French education (Gándara & Escamilla, 2017). New Mexico mirrored the ideas of

Ohio and Louisiana by passing laws that allowed Spanish-English instruction (Gándara & Escamilla, 2017).

Although education for language minorities (LM) seemed to be popular with states adopting laws to embrace bilingual education, the literature displayed bilingual education would soon come under attack following an economic recession in 1870 (Gándara & Escamilla, 2017). New language restrictive laws and policies started to surface by the 1880s (Gándara & Escamilla, 2017). By 1906, the Naturalization Act of 1906 was passed (Driever & Bagheri, 2018). The legislation required for any immigrant to become a citizen of the United States, the individual can first learn English (Driever & Bagheri, 2018)

English Language Learner Key Legislation

Following World War One, the oppression of bilingual instruction for LMs only became worse (Gándara & Escamilla, 2017). By 1923, 34 states had passed English-only laws (Gándara & Escamilla, 2017). The legislation restricted foreign language instruction and mandated all classroom instruction would be taught in English (Khodabakhsh, 2019). English-only law mandates not only made English education a requirement but made teaching in other languages illegal (Gándara & Escamilla, 2017). Literature provided an example in which a teacher was fired for providing students with educational instruction in German at a private school in the state of Nebraska (Gándara & Escamilla, 2017; Khodabakhsh, 2019).

The firing of the teacher for providing German instruction in an elementary school in Nebraska was challenged in court (Gándara & Escamilla, 2017). *Myer v. Nebraska 1923* cited the 14 amendments that gave Americans the right to provide dual-language instruction and disallowed discrimination among LM groups (Gándara & Escamilla, 2017; Khodabakhsh, 2019).

A decision by the Supreme Court was in favor of Myer and agreed with the notion of students and parents having a choice in education (Khodabakhsh, 2019).

In 1968, the Bilingual Education Act was passed into law. The legislation provided grants to school districts to develop bilingual education programs (Gándara & Escamilla, 2017). In addition to school districts, the provisions of the Bilingual Education Act of 1968 provided competitive grant funds to other entities which supported bilingual education (De Costa & Qin, 2016). Following the signing into law of Title VII of the Elementary and Secondary Education Act (ESSA), the legislation underwent six series of reauthorizations and revisions (De Costa & Qin, 2016; Gándara & Escamilla, 2017).

The body of literature displayed *Lau v Nichols 414 U.S. 563* was another court case that had a significant impact on ELLs (De Costa & Qin, 2016; Gándara & Escamilla, 2017; King & Bigelow, 2018; Marsh, 2018). In these major court cases following the authorization of Title VII of ESSA, there were 1,856 Chinese-speaking students who claimed to be denied equal education in San Francisco, California (Gándara & Escamilla, 2017). The students' claim, which led to the *Lau v. Nichols* Supreme Court case, was on the grounds that no accommodations were being made in the classroom instruction to take into consideration language differences (King & Bigelow, 2018). A Supreme Court ruling rendered in favor of Lau and agreed with the notion that the civil rights of the students receiving no steps to help in the acquirement of language instruction were being violated (Marsh, 2018). Following the court case ruling, the Equal Education Opportunities Act (EEOA) was passed (Marsh, 2018). EEOA legislation mandated schools throughout the United States to act in ensuring LMs are provided with a measure to help scale language barriers that prevent equal participation (Gándara & Escamilla, 2017).

Even with *Lau v. Nichols* making a law for accommodations to be made for students speaking a language other than English, the literature displayed further clarification was needed to support what those accommodations were (Marsh, 2018). De Costa and Qin (2016) and Marsh (2018) explained the specifics of the efforts were to be clarified in the *Castañeda v. Pickard* court case in 1981. The fifth circuit clarified the meaning of appropriate action by the implementation of a three-prong standard for including LM students (Flores, 2019). An initial prong of the appropriate actions included a program based on recognized theory (Gándara & Escamilla, 2017). The second prong required states in the program to implement assistance to LM students according to theory, and the last prong required for the theory-based program to prove the effectiveness of time (Gándara & Escamilla, 2017).

In place of the legislation to further Bilingual Education for LMs in the United States, the Supreme Court case of *Horne v. Flores of 1981* changed bilingual education in Arizona (Lewis et al., 2017). The significant ruling overturned a federal court finding that Arizona did not provide adequate instruction to LM students (Gándara & Escamilla, 2017; Marsh, 2018). In the final court ruling vote 5 to 4, the opinion of the Supreme Court judge supported the notion of structured English immersion programs being more effective than bilingual instruction (Gándara & Escamilla, 2017).

In context to ELLs, the No Child Left Behind (NCLB) Act of 2001 further changed education for LM students in public schools (De Costa & Qin, 2016; Gándara & Escamilla, 2017; Marsh, 2018). The mandate signed into law by President George W. Bush essentially repealed and replaced the former bilingual education (De Costa & Qin, 2016). Title III of NCLB was a controversial mandate, shifting the focus on educating ELLs from the most recent revision

of ESEA in 1994 to English language immersion (De Costa & Qin, 2016). Gándara and Escamilla further explained NCLB replaced the Bilingual Education Act with English Language Acquisition, Language Enhancement, and the Academic Achievement Act.

English Language Learner Instruction

Regarding ELL assessment, the literature gave insight noting there are a considerable number of models and methods used throughout the landscape of the United States (Besterman et al., 2018; De Costa & Qin, 2016; Marsh, 2018). Most studies emphasized Common Core State Standards (CCSS), academic rigor, and content-based language instruction (Besterman et al., 2018; De Costa & Qin, 2016). CCSS has been adopted by 42 different states (Marsh, 2018). An increased focus with CCSS is content-learning and text complexity (Marsh, 2018). A review of the literature noted the continuum standards and accountability measures are controversial, placing excessive demands on both teachers and LMs (Marsh, 2018).

Besterman et al. (2018) and Marsh (2018) expressed English as a second language (ESL), sheltered English immersion, and bilingual education are programs used in providing education to ELLs. ESL programs are the most common model used for educating LMs (Marsh, 2018). ESL is usually taught by teachers of English to speakers of other languages (TESOL) (Marsh, 2018). The focus of ESL is academic proficiency in the English language, and students usually are in ESL programs from 1 to 5 years (Besterman et al., 2018).

Sheltered English immersion (SEI), as explained by Besterman et al. (2018), is known as content-based ESL. Barrow and Markman-Pithers (2016) noted a similar explanation as Besterman et al. (2018), expressing students in SEI are provided academic instruction in English, but further noted the instruction is understandable to the language-minority student. The main

foci of sheltered English immersion are the obtainment of proficiency in academic English (Besterman et al., 2018). The method uses subject content primarily in English to educate students, with the use of the student's primary language being minimized during academic instruction (Barrow & Markman-Pithers, 2016). Most sheltered immersion programs are structured for students to attain proficient English development in 1 to 3 years (Besterman et al., 2018). Fine and Johnson (2016) provided a similar period of 2 to 3 years, regarding goals surrounding the attainment of English proficiency for ELLs.

Bilingual education models, according to Besterman et al. (2018), allow the usage of a student's primary language to facilitate academic instruction. Bilingual education programs are administered using different formats, which include transitional bilingual programs and two-way bilingual immersion programs (Lewis & Davies, 2018). Transitional bilingual education programs look to make students proficient in English, with the incorporation of the student's primary language (Barrow & Markman-Pithers, 2016). Two-way bilingual immersion programs are different than transitional bilingual programs, as the method is used to promote biliteracy in English and the student's primary language (Besterman et al., 2018). The program, also referred to as dual-language programs, is a model which provides language services to both language-minority and language-majority learners (Barrow & Markman-Pithers, 2016). The study does continue to criticize, deeming the instructional model to be controversial and politically charged (Besterman et al., 2018).

Achievement Gaps

Literature in several studies expressed ELL achievement gaps as being an emerging issue (Polat et al., 2016), with the noted increase of ELL populations in the United States of America

(Artigliere, 2019; Garcia & Morales, 2016; Garcia & Morales, 2016a; Marsh, 2018; Mavrogordato & Harris, 2017). Polat et al. (2016) explained, due to a historical record of chronic achievement trends and disparities between ELLs and non-ELL students, stakeholders (policymakers, states, districts, and parents) are receiving more requests for information on achievement gaps. Through academic years 1999 – 2014, students classified as ELLs exhibited lower scores than non-ELL students in mathematics regarding eighth-grade students (Marsh, 2018). Statistical support provided by Marsh (2018) from the National Assessment of Education Progress (NAEP) regarding achievement disparities provide statistical insight into the widening achievement gaps between the two student groups in the school choice options.

School Choice

The body of scholarly literature gave insight into school choice being both an important and controversial topic needing more research (Mavrogordato & Harris, 2017; Potterton, 2018; Sahin et al., 2017). Potterton (2018) stated an initiative set forth by the state, federal, and local governments to expand school choice provisions for students. This includes charter schools, intra- or inter-district open enrollment plans, vouchers, and tax credits. Mavrogordato and Harris (2017) noted school choice in the United States has become a popular education reform plan of action. Sahin et al. (2017) argued over the last 10 years, school choice in the United States has grown vastly with most of the attention being placed on charter schools.

Landmark Court Rulings & Legislation

Literature displayed a clear connection between the attainment of educational initiatives and the government, Supreme Court cases, and adopted legislation (Barnard-Brak et al., 2018; Doughty, 2016; Eastman et al., 2017; Logan, 2018; Long, 2018; Nelson, 2017; Zinskie & Rea,

2016.). Landmark court cases include *Brown v. Board of Education*, *Zelman v. Harris*, *Milliken v. Bradley*, and *Green v. County School Board of New Kent County* (Logan, 2018; Long, 2018; Nelson, 2017). Landmark legislation passed, which significantly influenced school choice throughout history, include the Civil Rights Act, the Elementary and Secondary Education Act (ESEA), the No Child Left Behind (NCLB) Act, and Every Student Succeeds Act (ESSA) (Logan, 2018; Long, 2018).

Zelman v. Simmons-Harris was a Supreme Court case that involved the debate of school choice in the light of voucher programs (Long, 2018). Long explained the court cases initiated with the involvement of a scholarship program being tested in Ohio. The purpose of the scholarship program was to aid parents who had children in low-performing schools (Long, 2018). Assistance would be provided in the form of a voucher and would allow the 4,000 students the school choice option of attending either a private or other public school (Khodabakhsh, 2019; Long, 2018).

The reason the voucher program was being challenged involved the fact that public funds received through the vouchers were being diverted to sectarian schools (Long, 2018). A notion of the funding was being challenged under the Establishment Clause, and the challenge ended up in the Supreme Court (Nelson, 2017). A Supreme Court ruling allowed for the voucher program to continue, as the program provided much-needed school choice options in Ohio (Long, 2018).

Nelson (2017) explained another significant court case that affected school choice, particularly in southern districts, was *Milliken v. Bradley*. The Supreme Court case addressed the issues of segregation and white flight from the school system. Essentially, the grounds for the court case were to encourage a white flight from public schools by allowing segregated

academies to remain in place through the restriction of desegregation activities (Archbald et al., 2018).

In *Runyon v. McCray*, African American students were being denied entry into an all-white private school (Brown, 2017). Black parents of the students being denied entry initiated an action pursuant to section 1981 under the Civil Rights Act (Nelson, 2017). A Supreme Court ruling to uphold the earlier decision of the lower court, where denying black students' entry into private schools was found to be discriminatory (Brown, 2017; Nelson, 2017).

Brown v. Topeka Board of Education was a Supreme Court case that took place in 1954 (Bartz & Kritsonis, 2019). The landmark court case was significant through the lens of school choice by challenging the notion of separate, but equal as being unconstitutional. The ruling concluded separate was unequal (Barnard-Brak et al., 2018). Doughty (2016) concurred with the conclusion noted by Barnard-Brak et al. (2018), which explained *Brown v. Board of Education* was significant in school choice by granting equal education opportunities to students, regardless of race. Doughty (2016) noted the 1954 Supreme Court ruling gave grounds to the recruitment of segregationists wanting schools to remain segregated.

The body of literature following the Supreme Court ruling of *Brown v. Board of Education* continued to demonstrate a push for civil rights and the relinquishment of segregation regarding school choice (Nelson, 2017). Two notable combinations of legislation contributing to equal school choice opportunities were the Civil Rights Act of 1965 and the Elementary and Secondary Education Act (ESEA) (Logan, 2018). The landmark pieces of legislation mandated the desegregation of public educational facilities (Logan, 2018; Nelson, 2017).

The No Child Left Behind Act (NCLB) of 2001 was signed into law by President George W. Bush (McGuinn, 2016). The NCLB Act began an era of federal responsiveness marked with the dissemination of assessments and testing at the state level (Wronowski & Urick, 2019). NCLB consisted of federal mandates which aimed to improve poorly performing schools (Logan, 2018). The controversial law alluded to in the two studies aimed to promote innovation and urge public schools to meet a set of rigorous standards (Logan, 2018; McGuinn, 2016). In the cases where the public education facility did not meet the set of standards imposed under NCLB, the school had to offer students the option to transfer to another school as a school choice option (McGuinn, 2016). Schools that did not meet the achievement goals within 6 years either had the option to become charter schools or be run by a private management company (Logan, 2018).

The latest reauthorization of the ESEA was signed into law by President Barack Obama in December of 2015 and named the Every Student Succeeds Act (ESSA) (Brown et al., 2019). ESSA reaffirmed legislation to combat the War on Poverty as initially set forth by President Lyndon Johnson (Zinskie & Rea, 2016). Similar to NCLB, the ESSA aimed to help improve public education but used a different approach than NCLB (McGuinn, 2016). Implementation of an approach different from the previous NCLB legislation through the lens of legislative policy change to the Every Student Succeeds Act theoretically would have an impact on academic performance.

Theoretical Perspectives

Literature displayed clear theoretical implications regarding school choice. A review of literature displayed trends showing market theory and economic theory contributed to the

theoretical formation regarding school choice (DeAngelis, 2018; Frankenberg et al., 2017; Gilblom & Sang, 2019a; Teasley, 2017). Market-based school choice, according to Potterton (2018), is viewed in the aspect of the historically situated and multi-directional process, which is attributed to the structure, culture, and agency domains.

Potterton (2018) theorized the well-defined ideological perspective of change. The aspects of social life and conceptual ideology are transformed by market-based school choice educational policies (Potterton, 2018). Frankenberg et al. (2017), concurred with the statements on Potterton (2018), which provided theoretical insight from literature that displayed an alignment between school choice and market theory. The notion of providing families with more school choices, expressed by Milton Friedman in 1950, would create competition among schools and theoretically would improve the education system (Frankenberg et al., 2017).

In addition to market theory providing better school-choice options to parents and students, the literature provided theoretical support aligning economic theory attributes with the betterment of school choice options (Frankenberg et al., 2017; Gilblom & Sang, 2019a; Potterton, 2018). Gilblom and Sang (2019a) expressed Porter's cluster theory has not only contributed to policy development but has become a standard. A cluster is a geographically close group of companies that are interconnected and related organizations in a specific field joined by commonalities and complementarities (Porter, 2000, as cited in Gilblom & Sang, 2019a). Clustering theorizes companies that are similar in industrial structure and located in geographic proximity (Gilblom & Sang, 2019a).

Like market theory, an economic theory derived from the ideology viewing theoretically increased competition can provide better choice options to customers (Frankenberg

et al., 2017; Potterton, 2018). Gilblom and Sang (2019a) explained Porter's cluster theory increases productivity in local companies and decides the direction the company moves towards innovation. In addition to increased productivity and directional and innovative amplification, Porter's cluster theory encourages other businesses to join the cluster, which in turn theoretically would make the cluster stronger (Gilblom & Sang, 2019a). The ideology of economic theory providing a better choice to customers through clustering supports the notion of a need for more than one option (Frankenberg et al., 2017; Potterton, 2018).

Charters as a School Choice

Literature provided clear implications of charter schools being popular, but highly contested emerging school choice options for parents and students (Anderson, 2017). Charter schools are public schools that are independently operated and exempt from numerous regulations in exchange for enhanced accountability (Anderson, 2017). Sahin et al. (2017) explained over the last 2 decades, the popularity of charter schools has made charters the fastest-growing school choice option in the United States. Barnard-Brak et al. (2018) explained in the United States, charter schools as a school choice have become a fixture in education.

The first charter school in the United States was authorized in 1991 in Minnesota (Ford & Ihrke, 2019; Marshall, 2017; Rapa et al., 2018;). Fritz (2016) alluded to the views of the establishment of charter schools which were introduced for two reasons. The initial reasoning was to provide additional education options to students and families (Fritz, 2016). The second reason was to create competition among charter schools and traditional public schools (Fritz, 2016). The promotion of competition among charter schools and traditional public schools aligns

with the theoretical implications of market theory (Frankenberg et al., 2017; Gilblom & Sang, 2019a; Teasley, 2017), which theorizes a market-based platform creates competition.

Charter School Performance

A review of the literature revealed insight into charters being successful school choice options (Cohodes, 2018; Ladner, 2018). Ladner (2018) provided thoughts regarding charter school performance in the states of Arizona, Colorado, New Mexico, and Utah. Ladner (2018) expressed charter schools exhibited a pattern of high-test scores. Although charters displayed high-quality performance, several studies noted these high-quality performances of charter schools are difficult to analyze due to the absence of research regarding lottery studies (Cohodes, 2018).

Enrollment Trend Descriptive Statistics

In the United States, charter enrollment grew from 2% to 7% between 2000-2001 and 2016-2017 (Public charter school enrollment, 2019). Rapa et al. (2018) provided statistical support which demonstrated the growth of charter schools and enrollments. In 2015 – 2016, the number of charter school enrollments across 43 states and the District of Columbia went up from 0.4 million in 2000-2001 to 2.8 million students enrolled in the academic years 2015-2016 (Rapa et al., 2018). Archbald et al. (2018) provided data that noted between 1990 and 2017, the existence of over 6,000 charter schools enrolling 5% of the school population. Ladd (2019) notated 6% of students in the United States have attended charter schools since the 1990s.

The literature alluded to the fact some states have higher enrollment trends of students selecting charter schools as a school choice option than others (Public charter school enrollment, 2019; Rapa et al., 2018; Sahin et al., 2017). Rapa et al. (2018) explained California has the

highest number of students enrolled in charter schools as a school choice option, accounting for 9% of the students in the state. States with charter student enrollments above the national average are Utah, Colorado, Minnesota, Wisconsin, and Arizona (Public charter school enrollment, 2019). In contrast, the District of Columbia has the largest number of public-school students who selected charter schools as a school choice option at 43% of students (Rapa et al., 2018). Sahin et al. (2017) presented descriptive statistical support which indicated charter schools being a school choice option that has grown in popularity over the past couple of decades. According to the National Alliance for Public Charter Schools, over 6,800 charters have opened, providing educational services to more than 2.9 million students throughout 42 states and the District of Columbia in 2015-2016 (Sahin et al., 2017).

Charter School and Ethnoracial Segregation

A plethora of studies presented insight into charter schools and patterns of segregation (Archbald et al., 2018; Billingham & Hunt, 2016; Eastman et al., 2017; Frankenberg et al., 2017; Gilblom & Sang, 2019; Jabbar & Wilson, 2018; Marshall, 2017; Heilig et al., 2019; Heilig et al., 2016). Literature explained segregation in the school systems remains high and exists between races and socioeconomic classes (Jabbar & Wilson, 2018). Although charter schools over the years aimed to diversify the school choice, the research shows these initiatives have often led to increased segregation (Jabbar & Wilson, 2018).

Billingham and Hunt (2016) explained in the history of school choice, two types of segregation exist, which are de jure and de facto. De jure segregation is where students are intentionally racially separated through mandates, and de facto segregation is unintentional separation (Billingham & Hunt, 2016). Archbald et al. (2018) and Heilig et al. (2019) stated

there is a historical debate among the public as to whether charters as a school choice option have fomented segregation. Jabbar and Wilson (2018) noted most scholars agreed on the idea charter schools are more segregated than traditional public schools.

Eastman et al. (2017) expressed the proliferation of charter schools in the United States has happened alongside the re-segregation of the school system. Archbald et al. (2018) explained enacting policies that are likely to attribute to increased segregation and create large quantities of schools with high concentrations of mostly underprivileged African American students is wrong. Eastman et al. (2017) provided statistical support which showed 70% of all black students attend charters that are immensely segregated.

Funding Expenditures of Charters

A review of the literature revealed information regarding charter schools' funding (Anderson, 2017; Teresa & Good, 2018). Teresa and Good (2018) reiterated the comments of Anderson (2017), which explained charters operate with some relaxation from the bureaucracies of traditional public schools. Unlike traditional public schools, charters do not have the same taxing authority. A lack of taxing power makes it difficult to purchase rent spaces in buildings for the school choice option (Teresa & Good, 2018).

Batdorf et al. (2015) explained charter school funding has been a heated topic in the light of school choice. Most of the funds received for charters are on a per-pupil basis (Batdorf et al., 2015). In most instances, funds are distributed using a funding formula (Teresa & Good, 2018). The funding formula to distribute the funds on a per-pupil basis usually takes charter school student enrollment into account; however, the facility still receives little to no financing (Teresa & Good, 2018). Batdorf et al. (2015) presented the notion of charter schools having different

laws than traditional public schools. A research project completed in 2005 called the Charter School Funding: Inequity's Next Frontier, concluded charter schools essentially received less per-pupil financing than traditional public schools in 26 districts across 16 states (Batdorf et al., 2015).

Charter School Theoretical Insight

Government failure theory (Ford & Ihrke, 2019), theories of new public management (Ford & Ihrke, 2019), and economic theory (DeAngelis, 2018; Flanders, 2017) provide insight into the various theories which govern charters as a school choice. The literature displayed clear implications charters as a school choice have given parents and students a plausible option to attend school in a more diverse community with more opportunity (Jabbar & Wilson, 2018). Teresa and Good (2018) expressed proponents push charter schools as a strategy for granting access to better schools to all students and creating market incentives for all schools to improve.

Ford and Ihrke (2019) explained that charter concepts as a school choice are consistent with two theoretical lines, which are government failure theory and public management theory. Government failure theory involves the implementation of a nonprofit organization to fill the void left when the government sector does not adequately provide a service to the public (Paarlberg & Zuhlke, 2019). Literature displayed implications showing government failure theory is an imperfect frame and pointed to an explanation of theories of new public management (Ford & Ihrke, 2019). The theory allows the use of alternative perspectives and practices (Eppel & Rhodes, 2018).

Theories of new public management pertain to using nonprofit and private organizations in the preparation of services that are publicly funded (Ford & Ihrke, 2019). In addition to

government failure theories and theories of new public management, the literature noted economic theory as having a significant impact on charters (DeAngelis, 2018; Flanders, 2017). According to Flanders (2017), economic theory is a long-established theory that proposes the ideology that localized systems have an increasing ability to align the needs of the service with the organization's constituents.

Theoretical implications of charters as a school choice theorized an alignment between economic theory and parental satisfaction (DeAngelis, 2018). The research journal expressed although leadership is important, parental satisfaction may be more important (DeAngelis, 2018). Linick (2016) noted economic theory as being a driving force to better efficiency. Economic theory noted a correlation between parental choice and school choice option experiencing more pressure to remain competitive by providing incentives and catering to the demands of individuals (DeAngelis, 2018).

English Language Learners in Charter Schools

The body of literature displayed a shortage of research evaluating ELL performance in charter schools (Frankenberg et al., 2017). Garcia and Morales (2016) stated despite the ELLs' value in the charter sector, there is only a small amount of research studies about authorizers in general, and no studies at all related to authorizers and ELLs. Lack of studies leaves parents and ELLs with a lack of knowledge into how charters perform as a school choice alternative to traditional public schools (Frankenberg et al., 2017). Some studies allude to the notion of ELLs in charter schools are an underrepresented minority (Buckley & Sattin-Bajaj, 2011 as cited in Garcia & Morales, 2016; Frankenberg et al., 2017). The authors explained ELLs in charters have become the center of much debate from the standpoint of policy, but the literature displayed a

gap in studies needing to be filled with more literature to support the representation of ELLs in charters (Garcia & Morales, 2016).

Existing Research on Charter School Performance

A review of literature displayed a plethora of studies examining student performance in charters as a school choice but displayed an obvious lack of research regarding ELL performance in charters (DeAngelis, 2018; Flanders, 2017; Kalulu et al., 2017; Maranto & Vasile, 2018; Mavrogordato & Harris, 2017; Sahin et al., 2017; Shin et al., 2017; Winters et al., 2017). DeAngelis (2018) provided a quantitative study in which the researchers sought to examine whether open enrollment school choices increase parental satisfaction. To examine the research questions, a survey was sent to the parents of the students. Ordered prohibit regression from the study regarding parental satisfaction with school choice concluded there was a correlation between open-enrollment status and increased parental satisfaction (DeAngelis, 2018). Maranto and Vasile (2018) provided insight into charter enrollment in Arizona, which accounts for approximately 17% of public-school students in the state. A literature review conducted by Maranto and Vasile provided a summary of 23 scholarly publications from various sources which analyzed the research topic of whether charters provide better educational services than traditional public schools. The study concluded with some certainty in a general sense, that Arizona schools increased parental satisfaction (Maranto & Vasile, 2018).

Shin et al. (2017) researched whether charter schools and traditional public schools attracted different students and teachers in the Los Angeles Unified School District. Furthermore, an examination was completed to reveal whether charter schools statistically outperformed traditional public schools (Shin et al., 2017). Ordinary least squares regression and two quasi-

experimental techniques were used to examine achievement outcomes, student characteristics, and teacher attributes concluded with charters in Los Angeles at measure, then started to rely on experienced educators (Shin et al., 2017). In a review of the efficiency of charter schools as a school choice in Milwaukee, Wisconsin, Flanders (2017) aimed to evaluate the skillfulness of charters in contrast to traditional public schools. The quantitative study used a three-step process that incorporated regression coefficients and a one-sample t-test (Flanders, 2017). In conclusion, the research project found all charters are not the same, and while some charters performed like traditional public schools, other charters outperformed traditional public schools (Flanders, 2017).

Winters et al. (2017) evaluated differences in charter school and traditional public-school performance, using Denver, Colorado, and New York City, New York, as the geographical locations of the study. A linear probability model used to evaluate the longitudinal student-level administrative data concluded students in the two large cities were either equally or less likely to leave charters as to leave traditional public schools (Winters et al., 2017). Sahin et al. (2017) examined students' performance in 12 charter schools in Harmony Public Schools (HPS) which were compared to 32 matched traditional public schools. Results from the quantitative study, using an independent t-test, One-way Analysis of Variance (ANOVA), and Univariate General Linear Model, concluded overall, charter schools outperformed traditional public schools (Sahin et al., 2017).

In an investigation of charter schools' impact on traditional public-school performance, Kalulu et al. (2017) concluded the performance of open-enrollment charters in the State of Arkansas had been positive. A conclusion was reached following the evaluation of academic

performance scores, using the Iowa Assessment to run several regression analyses (Kalulu et al., 2017). Clarke and Burt (2019) used ANOVA and t-test to determine the differences between charter and traditional public-school student performance in mathematics. The author concluded the trends analyzed in the study needed additional investigation (Clarke & Burt, 2019).

A review of literature displayed substantially fewer studies investigating ELL performance in charters as a school choice (Mavrogordato & Harris, 2017). Garcia and Morales (2016) expressed concern regarding the lack of research studies surrounding ELLs' equitable access to charter schools. Mavrogordato and Harris (2017) concluded in a quantitative study reviewing whether parents of students who were never, existing, or former ELL students had school choice options raised more questions. The conclusion of the binary logistic regression analysis led the researchers from Michigan State University and CNA's Institute for Public Research to note future research into the school choice topic would be beneficial to the body of literature (Mavrogordato & Harris, 2017).

Chapter Summary

A review of the literature provided a synthesis of the body of scholarly publications regarding ELLs and school choice. A thorough synthesis displayed a noticeable gap in the literature regarding studies statistically analyzing performance differences between charter schools and traditional public schools (Flanders, 2017; Kalulu et al., 2017; Maranto & Vasile, 2018; Mavrogordato & Harris, 2017; Sahin et al., 2017; Shin et al., 2017; Winters et al., 2017). Furthermore, the literature displayed a larger gap in studies evaluating ELL performance in charters as a school choice in comparison with traditional public schools (Mavrogordato & Harris, 2017). According to Garcia and Morales (2016), a need to contribute future research to

address the literature gap regarding school choice is noted by those identified. Future research would provide parents and students with information regarding school choice options, along with a piece of scholarly literature to fill the gap.

Research databases used to lift the publications were revealed. In addition to the research databases, the chapter displayed keywords used to conduct a thorough search of credible sources. A discussion of the theoretical framework supporting the evaluation of the research questions was presented in the chapter. The literature review synthesized a plethora of research, evaluating the main themes of English Language Learners, School Choice, Charters as a School Choice, and Existing Research on Charter School Performance.

Rational choice theories and contingency theories of leadership served as the theoretical framework for the school choice study. Rational choice theory is a series of choices that are viewed as being rational (Scholtz, 2015). Providing a parent with information regarding whether ELLs perform better in charters as a school option alternative may give the parents and students the information needed to make a rational choice. Contingency theories of leadership are a type of situational leadership in which there is no one single way to lead, but the style would be dependent on the situation (Khan & Nawaz, 2016). Rational choice theories and contingency theories of leadership provide grounds to evaluate the research objective in selecting the rational school choice which best serves the students academically (Aalateeg, 2017; Khan & Nawaz, 2016; Kliemt, 2018; Marshall, 2017; Scholtz, 2015).

The study further evaluated school choice by providing an in-depth description of ELLs. ELLs are the fastest-growing student population group in the United States (Artigliere, 2019; Garcia & Morales, 2016; Garcia & Morales, 2016a; Marsh, 2018; Mavrogordato & Harris,

2017). English language learner (ELL) is defined as an individual who is born in a country outside of the United States or in the United States but has a home language that is not English. (Marsh, 2018). Literature displayed a documented history of achievement gaps and legislation used to govern education for ELLs (De Costa & Qin, 2016; Gándara & Escamilla, 2017).

A review of research publications displayed a history of school choice in the United States, noting school choice over the past decade has become a highly debated topic (Barnard-Brak et al., 2018; Doughty, 2016; Eastman et al., 2017; Logan, 2018; Long, 2018; Nelson, 2017; Zinskie & Rea, 2016). Literature investigating school choice options provided theoretical perspectives surrounding school choice options (DeAngelis, 2018; Frankenberg et al., 2017; Gilblom & Sang, 2019; Potterton, 2018; Teasley, 2017) and revealed market theory and economic theory are among the thoughts of research used in theorizing the notion of school choice for parents and students. A noticeable lack of studies involving school choice options for ELLs exists. The body of literature evaluating charter performance, funding, enrollment trends, and opportunity had a considerable number of studies, but fewer studies exist specifically focusing on evaluating the fastest-growing student population of ELLs in the fastest growing school choice: charter schools (Cohodes, 2018; Gilblom & Sang, 2019; Heilig, 2019; Jabbar & Wilson, 2018; Ladner, 2018; Rapa et al., 2018; Teresa & Good, 2018).

Existing research studies displayed some comparisons of charter performance with traditional public schools (DeAngelis, 2018; Flanders, 2017; Kalulu et al., 2017; Maranto & Vasile, 2018; Mavrogordato & Harris, 2017; Sahin et al., 2017; Shin et al., 2017; Winters et al., 2017). The literature displayed a mixture of conclusions from the studies regarding the school performance of charters. An evident gap in the body of literature supporting studies that provide

parents and students classified as ELLs with statistical information regarding which school choice option better serves language minority groups exists (Kalulu et al., 2017; Maranto & Vasile, 2018; Mavrogordato & Harris, 2017).

Information regarding the research methods used to test for statistically significant differences regarding the gap in research can provide parents with information to support making a rational choice in the line of school options is provided in Chapter 3. The performance of charter schools and traditional public schools in a large metropolitan school district in the Southeast was analyzed using two-way ANOVA (Two-way ANOVA in SPSS statistics, 2018). The findings of the quantitative, ex post facto study may provide an in-depth oversight as to whether charter schools outperform, underperform, or perform similarly to traditional public schools in meeting the academic needs of ELLs (Kaur, 2017; Khaldi, 2017).

Chapter 3: Methodology

Charter schools in the past couple of decades have become the fastest-growing school choice option within the public school system in the United States and one of the most debated topics in education (Sahin et al., 2017). Charter schools are independently run public schools which are exempt from many of the regulations of traditional public schools but come with an increased level of accountability (Anderson, 2017). Within the public school system, English language learners (ELLs) are the fastest-growing student population (Besterman et al.). The purpose of the quantitative, ex post facto study was to investigate academic performance among ELLs to determine whether statistically significant differences existed between participation in charter and traditional public schools, and between elementary, middle, and high school levels through a review of World-Class Instructional Design and Assessment (WIDA) ACCESS scores for 20 charter schools and 20 traditional public schools in a large metropolitan Southeastern school district. The quantitative ex post facto study was needed to provide parents and students with information regarding school choice. The quantitative ex post facto study was used to address the lack of research to examine the relationship of charter schools being an alternative school choice for the fast-growing ELL population.

In the United States, ELLs are enrolled in three out of four schools (Besterman et al., 2018). Without the quantitative ex post facto study examining the relationship between the school options, the gap in research would have left parents and students with the uncertainty concerning performance differences between students in charter schools and traditional public schools. The findings of the quantitative ex post facto study provide an in-depth oversight as to whether charter schools outperform, underperform, or perform similarly to traditional public

schools in meeting the academic needs of ELLs. The quantitative ex post facto provides parents, teachers, the school board, and research community with the needed information to understand the relationships regarding ELL performance of students enrolled in charter schools and traditional public schools. The quantitative ex post facto study provides a platform to identify measures that can be used to close achievement gaps in the subjects of science, mathematics, and reading language arts.

Research Questions

Research questions are used to form a strong research study (Ratan et al., 2019). The questions are used to identify the problem, guide the methodology, and lead to the development of a hypothesis. The following questions guided the research study:

Research Question 1: What is the statistically significant difference in ELL academic performance by participation in charter and traditional public schools?

Research Question 2: What is the statistically significant difference in ELL academic performance by school-level in charter and traditional public schools?

Research Question 3: Does an interaction effect of participation and school level exist in WIDA ACCESS scores for ELL students?

Hypothesis

The hypotheses in scientific-based research are statements regarding expected relationships that exist between dependent and independent variables (Kaur, 2017). There is no relationship existent between the dependent and independent variables regarding the null hypothesis (Kaur, 2017). The following hypotheses were used to test for statistically significant differences in the study:

H1_o: No statistically significant difference exists in WIDA ACCESS scores of ELL students attending charter and traditional public schools.

H1_a: A statistically significant difference exists in WIDA ACCESS scores of ELL students attending charter and traditional public schools.

H2_o: No statistically significant difference exists in WIDA ACCESS scores for ELL students between elementary, middle, and high school levels.

H2_a: A statistically significant difference exists in WIDA ACCESS scores for ELL students between elementary, middle, and high school levels.

H3_o: No interaction effect of participation in charter and traditional public schools and elementary, middle, and high school levels exists in WIDA ACCESS scores for ELL students.

H3_a: An interaction effect of participation in charter and traditional public schools and elementary, middle, and high school levels exists in WIDA ACCESS scores for ELL students.

Details of the research design and rationale are justified within the following text.

Research procedures and data analysis are sequenced. Reliability, validity, and ethical procedures, with insights from research experts, conclude the research plan.

Research Design and Rationale

Research is the scientific and systematic exploration of relevant information regarding a specific matter (Apuke, 2017). Quantitative research encompasses the gathering of statistical data for information to be measured and subjected to statistical action. The statistical treatment of quantitative data was used to support or contest alternative information claims (Apuke, 2017).

Quantitative research initiates with a problem statement, research questions and hypothesis generation, review of the literature, and an analysis of quantitative data (Apuke, 2017).

A quantitative, ex post facto design was used to compare statistical data regarding school choice for ELLs in charter schools and traditional public schools through examination of statistically significant differences on the WIDA ACCESS examination. The quantitative design is appropriate to test the hypothesis for a relationship between an independent variable and a dependent variable (Kaur, 2017). The design is appropriate in non-experimental research, which regards no manipulation of the independent variable (Khaldi, 2017).

Role of the Researcher

According to Apuke (2017), the role of the researcher in ex post facto studies is to investigate a problem through the study of the variables in retrospect. The role of the researcher in the ex post facto study was to investigate differences in the performance of ELL students in charter schools and traditional public schools on the WIDA ACCESS examination. I have no association with the selected school district in the Southeast where the study was conducted. Using archival data readily available through the school district's website and released for research purposes minimized the possibility of researcher interference as it involved no human interaction.

Research Procedures

In this section, the research procedures for the quantitative, ex post facto study are discussed. A detailed explanation description of the population and sample selection, instrumentation, data collection, and data preparation are provided. The research procedures provided are followed by data analysis.

Population and Sample Selection

The population for the quantitative ex post facto study was selected from a district in a large, southeastern city using purposive sampling to retrieve data specific to the target population. A sample is a component of the population (Etikan et al., 2016). Samples refer to the overall quantity of the cases which are the research participants (Etikan et al., 2016). Purposive sampling is a form of sampling where individuals are deliberately selected because of qualities possessed by the participant (Etikan et al., 2016). The records selected for review were representative of ELLs from grade levels kindergarten through 12, who were enrolled in charter schools and traditional public schools, using geographical proximity as matching criteria and accessible quantitative archival data from the school district's website (Data downloads & request, 2019; Etikan et al., 2016).

Traditional public schools are schools that facilitate education preserved in traditional form (Sibirskaya et al., 2019). Charter school and traditional public-school selection can be completed using a specific process. Charter schools are public schools that operate independently under an authorizing body (Koller & Welsch, 2017). The entire sample ($n = 155$) of public schools for the select population was considered in the initial selection process. The nature of the quantitative ex post facto study compared ELL performance scores in charter schools ($n = 29$) with traditional public schools ($n = 82$). Magnet schools ($n = 37$), non-traditional schools ($n = 4$) and alternative schools ($n = 3$) were exempt from selection because magnet schools, non-traditional schools, and alternative schools do not meet the criteria. Purposive sampling is an appropriate non-probability sampling technique, which can be used to match the schools in the quantitative ex post facto study (Etikan et al., 2016).

Once the charter schools and traditional public schools were selected, the schools were matched using two factors. The schools were first matched by grade levels served. After the charter schools and traditional public schools were broken down into grade levels served, the schools were matched through geographical location proximity. Since the data are public information, consent was not required (Data downloads & request, 2019).

The sample of 20 charter schools and 20 traditional public schools consisted of school-level data (Data downloads & request, 2019). The school-level data included the number of valid test scores and the number of scores that were considered to have met the exit criteria period to support the convenience sample a priori, an *F* test was conducted using G* Power (Kang, 2021). The *F* test conducted for the statistical test ANOVA dash fixed effects, special, main effects, and interactions was performed at an alpha level of .05 with an effect size of .5, a power of .8m and *df* as 4 (5 groups – 1), the sample size is supported at 53. A sample size of 40 was used in the ex post facto study, which added limitations to the analysis that were addressed in Chapter 4.

Instrumentation

The WIDA ACCESS assessment is given to all ELLs in charter schools and traditional public schools and can be used to compare the two student groups (World-class instructional design and assessment for ELLs, 2018). Continuous data scale scores range from 100 to 600 on the assessment. The assessment was established in 2004 by the University of Wisconsin and is given to students in charter schools and traditional public schools who have been identified as ELLs (World-class instructional design and assessment for ELLs, 2018). The WIDA ACCESS assessment is provided to students on an annual basis to measure the students' knowledge in academic English (World-class instructional design and assessment for ELLs, 2018). The WIDA

ACCESS assessment responds to the English Language Development Standards (World-class instructional design and assessment for ELLs, 2018). WIDA English Language Development Standards represent the social, instructional, and academic language needed for a student to engage with peers, teachers, and the program in a school. The resource works with content standards to ensure the student is continuing to develop English language skills (World-class instructional design and assessment for ELLs, 2018).

The assessment test assesses four proficiency areas for each student, including listening, speaking, reading, and writing (World-class instructional design and assessment for ELLs, 2018). The WIDA ACCESS assessment is available to students in four different formats, which are: Kindergarten ACCESS for ELLs, ACCESS for ELLs Online, ACCESS for ELLs Paper, and Alternative ACCESS for ELLs (World-class instructional design and assessment for ELLs, 2018). The English Language Proficiency Assessment Additional School Level Data for the academic year 2017 may be used to gather data from each school, regarding the school's information and performance scores and percentages (Data downloads & request, 2019).

WIDA ACCESS scale scores are scored depending on the way the examination is administered. In ACCESS for ELLs Online, listening and reading are automatically scored during the administration of the examination. The speaking and writing domains of the test are scored by the test delivery partner (World-class instructional design and assessment for ELLs, 2018).

ACCESS for ELLs Paper examinations is administered by the state. Once complete, the state ships the test booklets to the ACCESS test delivery partner who scores the listening, reading, and writing domains of the examination. The test administrator scores the speaking

domain of the test inside the booklet and sends the information to the ACCESS delivery partner. The ACCESS delivery partner captures the speaking scores for reporting. All domains for Kindergarten ACCESS for ELLs and Alternative ACCESS for ELLs are scored by the test administrators. Once scored, the test booklets are sent to the ACCESS delivery partner for scores to be captured and reported (World-class instructional design and assessment for ELLs, 2018).

Prior to WIDA ACCESS scores being printed, the states are allowed to review the examination scores. The review period allows states to identify any errors and make corrections (World-class instructional design and assessment for ELLs, 2018). The review time allowed to catch and rectify any mistakes contributes to the validity of the examination results.

Archival Data

Archival data can be used to advance and test theory (Barnes et al., 2018). Archival data are derived from archival theory which builds on social science research and descriptive analysis (Loughnane & Aspray, 2018). Social science data archives, according to Loughnane and Aspray, have expanded to specific developments. The specific developments include machine-readable data which are available for use and reuse (Loughnane & Aspray, 2018).

The WIDA ACCESS archival data used in the quantitative ex post facto study were machine-readable data as described by Loughnane and Aspray (2018), which provided ELL performance score data for the WIDA ACCESS assessment of students in charter schools and traditional public schools. The WIDA ACCESS scores were accessible through the state website of the selected school district (Data downloads & request, 2019). WIDA ACCESS data are displayed on the state websites as the sum of valid test scores with the number of test scores that meet the exit criteria (see Appendix B; Data definitions, 2019). Additionally, the state website of

the selected large metropolitan school district in the Southeast displayed the aggregated data as percentages dividing the number of valid test scores that met the exit criteria by the total number of valid test scores (Data downloads & request, 2019). The aggregate data enclosed in the Excel file on the district's website used for this study are broken down by school system and school name (see Appendix B). Social science archives exist to provide the machine-readable data for research and analysis purposes. The archival data used for the quantitative ex post facto research were available on the selected district's Department of Education website.

The main data set of WIDA ACCESS archival score data was accessed through the Department of Education website for the selected school district (World-class instructional design and assessment for ELLs, 2018). Since the data are public record, permission to access the data sets was not needed. The Department of Education website was the main source of archival data storage for the selected school district (Data downloads & request, 2019).

Data Collection

The data collection method in a study aligns with the research questions and the aims of the research (Ivey, 2017). Secondary data are pre-existing data available through a second-hand source (Sahin et al., 2017). According to Ivey (2017), data collection may directly affect the importance and validity of a research study.

Data were collected from the selected district's Department of Education website (see Appendix B) as a download in Excel format. The 2017 school level WIDA ACCESS measures were collected for kindergarten through 12th grade. WIDA ACCESS measures consist of the school names, school codes, number of valid assessments, number of students who met exit criteria, and percentage of students who met the exit criteria (Data downloads & request, 2019).

The school addresses, grade levels, and school categorizations for the 20 charter schools and 20 traditional public schools were obtained through the National Center for Education Statistics (National Center for Education Statistics, 2019). Since the achievement score data and school locations are public data available on the district website, informed consent was not needed to obtain the archival data for the quantitative, ex post facto study. The data for the quantitative, ex post facto study is stored on a flash drive stored in a locked cabinet in a secure location.

Data Preparation

Statistical data, as noted by Kwak and Kim (2017), involves the organization of data and the management of missing values. To prepare the archival data for analysis, a specific preparation process was followed. Raw data and descriptive statistics were collected from the Department of Education and the National Center for Education Statistics (Data downloads & request, 2019; National Center for Education Statistics, 2019). One of the most effective methods of representing quantitative data is to place the data into a Microsoft Excel spreadsheet (Garrett, 2015). Microsoft Excel is a popular, widely used analysis tool (Garrett, 2015). The population of public schools ($n = 155$) of WIDA ACCESS achievement score variables were retrieved from the selected district's Department of Education Website in Excel format (Data downloads & request, 2019).

Data Cleaning

To clean and prepare the data for analysis, the sample was sorted by school categorization. The excluded public-school valid test scores for magnet schools ($n = 37$), alternative schools ($n = 3$) and non-traditional public schools ($n = 4$) were removed from the spreadsheet (Data downloads & request, 2019; Garrett, 2015). The purposive sample of 3,499

traditional public schools ($n = 82$) and 1,161 charter school ($n = 29$) valid test scores, number of students who met the exit criteria per WIDA ACCESS examination standards, percent of students who met exit criteria, grades levels the school serves, and physical addresses were placed into the Microsoft Excel spreadsheet. Traditional public schools and charter schools not containing ELL data were excluded from the Microsoft Excel spreadsheet. The total number of schools used in the study of ELL student performance was 40 schools, which were 20 charter and 20 traditional public schools

In this study, a total sample of 4,660 valid test scores were used for the analysis. The number of charter schools used for investigation was 1,161. A total of 3499 traditional public schools were contained in the sample used in the two-way ANOVA. The sample of charter schools by school level included 317 elementary, 694 middle, and 150 high schools. Traditional public schools by school level were comprised of 387 elementary, 1,733 middle and 1,379 high schools in the large metropolitan school district in the Southeast.

Data Sorting

An initial set of 29 charter schools and 70 public schools were sorted into two Microsoft Excel spreadsheet tabs. The schools with 0% valid test scores were excluded from the quantitative, ex post facto study. The resulting 20 charter schools and 20 traditional public schools were first sorted by grade level. Once sorted by grade level, proximity data were used to match the charters and traditional public schools for analysis.

The data file consisted of two tabs with six rows under each tab. The first tab was charter schools. The second tab in the Excel file was traditional public schools. Within each charter school and traditional public-school tab, the first row was the participant identifier. The valid test

was the second row, which displayed the number of valid test scores the school made available. Met_exit_criteria was the third row in the Excel file, where the number of students that met the exit criteria by the system standards was displayed. School type was the fourth row of the spreadsheet. Grades was the fifth level of the spreadsheet, displaying the grade levels that the school serves. Address was the sixth and final row in the Microsoft Excel file.

Elementary schools in the selected large metropolitan school district in the Southeast do not all serve the same grade levels. Schools considered elementary were broken into two fields. The first field was kindergarten through fourth grade. The second field included schools serving kindergarten through fifth grade.

Middle schools in the selected large metropolitan school district in the Southeast do not all serve the same grade levels. Middle school valid test scores were grouped into four fields. The first field was grades fifth and sixth. The second field was grades fifth through seventh. The third field was grades fifth through eighth. The fourth field was grades sixth through eighth.

High schools in the selected large metropolitan school district in the Southeast do not all serve the same grade levels. The high school choice options were categorized using two fields. The first field was test scores from ELL students in schools serving Grades 9 through 11. The second was schools that serve Grades 9 through 12.

Once the data were grouped by school type and grade level, the charter schools and traditional public schools were matched using proximity data. The 20 charter schools purposefully selected for the quantitative, ex post facto study were matched to 20 traditional public schools which served the same grade levels and were in closest geographical proximity.

Data Analysis

The study evaluating ELL performance independent variables were participation (charter schools and traditional public schools) and school level (elementary school, middle school, and high school). WIDA ACCESS examination was the independent variable. Two-way ANOVA is an extension of the one-way ANOVA statistical test (Mishra et al., 2019). To examine the research hypotheses, SPSS was used to perform the two-way ANOVA to investigate an interaction between the dependent and independent variables in the study (Two-way ANOVA in SPSS statistics, 2018). The main purpose of two-way ANOVA is to understand any inner relationships among dependent variables and independent variables in a research study (Mishra et al., 2019). This data analysis method uses two categorical variables and a continuous dependent variable, with the dependent variable being approximately normally distributed (Mishra et al., 2019). Quantitative ex post facto was used to analyze any interrelationships between school choice and academic performance of ELLs.

Two-way ANOVA has six assumptions. Assumption one is the dependent variable should be measured at a continuous level (Two-way ANOVA in SPSS statistics, 2018). Assumption two is the two independent variables each consist of two or more categorical independent groups. A third assumption of two-way ANOVA is an independence of observation period. No significant outliers are the fourth assumption of two-way ANOVA. SPSS was used to test assumption four for the presence of any significant outliers. Levene's test for homogeneity was used to test assumption six (ACCESS for ELLs interpretive score guide, 2022).

Assumption five is the dependent variable is approximately normally distributed for each combination of the groups of the two independent variables. The sixth assumption is a

homogeneity of variance for each combination of the groups of the two independent variables (Two-way ANOVA in SPSS statistics, 2018).

The archival score data met the first assumption because the dependent variable, wider examination scores, was measured at a continuous level (ACCESS for ELLs interpretive score guide, 2022). The continuous data use scale scores which range from 100 to 600. The two independent variables, participation, and school level, met the second assumption of two-way ANOVA. Participation consisted of two categorical variables (charter schools and traditional public schools). School level had three categorical variables (elementary school, middle school, and high school). No relationship existed between each group's observation or the groups themselves. Students were either in a charter school or a traditional public school, but not in both groups. ELL students were either in elementary school, middle school, or high school. The criteria of two-way ANOVA for assumptions one through three were met (ACCESS for ELLs interpretive score guide, 2022).

A two-way ANOVA to address hypotheses 1 through 3 was conducted on the charter school and traditional public school WIDA ACCESS assessment scores for ELL students in the matched schools serving school grade levels (Upendra et al., 2017; World-class instructional design and assessment for ELLs, 2018). The quantitative, ex post facto study used archival data which did not consist of any personal identifiable information. The charter school and traditional public-school information retrieved for the quantitative, ex post facto study was placed on a flash drive, coded, and locked in a file cabinet.

Reliability and Validity

Evidence of reliability and validity is important in assuring the quality of an instrument (Mohajan, 2017). Reliability in quantitative research refers to the accuracy of the instrument being used (Heale & Twycross, 2015). Validity is the extent to which a specific concept is measured in quantitative studies (Heale & Twycross, 2015).

The WIDA ACCESS examination is provided to students, who have been identified as ELLs in grades kindergarten through 12 and is the most widely used resource for teachers who support multilingual learners (World-class instructional design and assessment for ELLs, 2018). The Every Student Succeeds Act (ESSA) was signed into law on December 10, 2015, by President Barack Obama. The ESSA federal mandate is the re-authorization of the Elementary and Secondary Education Act of 1965 (Zinskie & Rea, 2016). WIDA meets the federal requirements of the Every Student Succeeds Act and is used to supervise and report progression towards meeting English language development (World-class instructional design and assessment for ELLs, 2018).

WIDA is a reliable, valid, and trusted source throughout 40 U.S. states, federal agencies, territories, and 400 international schools (World-class instructional design and assessment for ELLs, 2018). WIDA ACCESS scores are calculated by professionally trained test administrators using the WIDA Model Score Calculator. This score calculator may be used by educators and test administrators as the official tool used to calculate proficiency and scale scores for ELL students (WIDA model score calculator, 2020). Strict inclusion criteria, which match charter and traditional public schools by grade level and geographical location proximity, supported the internal validity of the ex post facto study (Alpman, 2016; Kessler, 2019). No threats to the

WIDA ACCESS achievement score data were apparent from the information collected from the Department of Education website.

Ethical Procedures

To assure ethical treatment of human subjects, the quantitative, ex post facto study was submitted to the American College of Education Institution Review Board for approval prior to collecting data. Informed consent was waived due to the WIDA ACCESS student evaluation statistical data being public records (see Appendix A). The National Institutes of Health (NIH) training was completed to help ensure all sensitive information is protected. NIH is a response to the Public Health Service Act (PHSA) of 1944 federal mandate (Johnson & Sekar, 2019). The federal mandate is used to provide more protection to human participants in research (Protecting human research participants, 2018). The WIDA ACCESS achievement score variables for the selected population are public data and do not reveal any participant information.

The schools' information retrieved for the quantitative, ex post facto was placed on a flash drive, coded, and double-locked away in a cabinet located in a secured office space. The secured office space with the locked file cabinet has restricted access to authorized personnel. The data will be kept on the flash drive in the locked file cabinet in a locked office space for 3 years following the acceptance and publication of the quantitative, ex post facto study. At the expiration of the 3-year time, the data can be erased, and the data files can be destroyed.

Chapter Summary

The purpose of the quantitative, ex post facto study was to investigate academic performance among ELLs to determine whether statistically significant differences existed between participation in charter and traditional public schools and between elementary, middle,

and high school levels through a review of World-Class Instructional Design and Assessment (WIDA) ACCESS scores for 20 charter schools and 20 traditional public schools in a large metropolitan southeastern school district. The methodology, research design and rationale, research procedures, population and sample, instrumentation, data collection, data preparation, and data analysis were described in Chapter 3. The quantitative, ex post facto study is appropriate to address the research questions and test the hypothesis for an association between the dependent and independent variables for significance. The two-way ANOVA is an appropriate parametric data analysis tool to conduct the statistical analysis of the data sample which can be retrieved, cleaned, arranged, coded, and placed onto the Microsoft Excel spreadsheet for analysis (Garrett, 2015).

Chapter 3 included the reliability and validity and ethical considerations regarding the study. The WIDA ACCESS assessment is both reliable and valid (Heale & Twycross, 2015). WIDA ACCESS is an internationally recognized assessment that meets the standard for testing ELLs in accordance with the ESSA federal mandate in the United States of America (World-class instructional design and assessment for ELLs, 2018). The assessment is both reliable and valid (Heale & Twycross, 2015).

Ethical considerations were discussed in detail in Chapter 3. The quantitative, ex post facto analysis study does not use human participants, but undergoing research training at the NIH can ensure the protection of sensitive information (Protecting human research participants, 2018). Sensitive information can be stored in a secured, restricted location to ensure the protection of sensitive information.

In Chapter 4, the results of the ex post facto study using the two-way ANOVA to analyze the WIDA ACCESS achievement score data will be presented. Tables and written explanations will provide the results of the two-way ANOVA. The results will be used to provide statistical evidence to support school choice options for ELLs.

Chapter 4: Research Findings and Data Analysis Results

School choice is a mainstream and controversial issue in public education (Rapa et al., 2018). While the popularity of charter schools as a school choice option increased, more English language learners (ELLs) were enrolling in the public education system in the United States (Besterman et al., 2018). Despite the acknowledgment of statistical trends displaying an influx of ELLs and charters becoming a popular school choice option, little literature focuses on the convergence of the two trends (Garcia & Morales, 2016). The problem was that it was not known whether there was a difference between ELL performance in traditional public schools and charter schools in a large metropolitan school district in the Southeast. The purpose of the quantitative, ex post facto study was to investigate academic performance among ELLs to determine whether statistically significant differences existed between participation in charter and traditional public schools, and between elementary, middle, and high school levels through a review of World-Class Instructional Design and Assessment (WIDA) ACCESS scores for 20 charter schools and 20 traditional public schools in a large metropolitan southeastern school district.

Data collection of the ex post facto study is presented in this chapter. Succeeding data collection, a detailed presentation of the data analysis and results are presented in Chapter 4. A description of reliability and validity are offered, concluded by a summary of the research findings for the chapter.

Data Collection

According to Ivey (2017), a data collection method in a study aligns with the research questions and the aims of the research. Secondary data are pre-existing data available through a

second-hand source (Sahin et al., 2017). According to Ivey (2017), data collection may directly affect the importance and validity of a research study.

Data were collected from the selected district's Department of Education website for 20 charter schools and 20 traditional public schools (see Appendix B). The 2017 school-level WIDA ACCESS measures were collected for kindergarten through twelfth grade. WIDA ACCESS measures consist of the school names, school codes, number of valid tests, number of students who met exit criteria, and percentage of students who met the exit criteria (Data downloads & request, 2019). The school addresses, grade levels, and school categorizations for the matched charter schools and traditional public schools were obtained through the National Center for Education Statistics (National Center for Education Statistics, 2019). Since the achievement score data and school locations are public data available on the district website, informed consent was not needed to obtain the archival data for the quantitative, ex post facto study. The data for the quantitative, ex post facto study were stored on a flash drive stored in a locked cabinet in a secure location.

Four charter and four traditional public schools were excluded following matching which excluded the school choice based on geographical proximity and school level. A total sample used in the two-way ANOVA consisted of 20 charter schools and 20 traditional public schools. The 20 charter schools had 1,161 valid test scores and 3,499 for the 20 traditional public schools, with a total sample of 4,660.

Data Analysis and Results

Prior to analyzing the statistical data, the school choice options were taken from the school district's website. A matching technique was used to evenly match the school choice

options using proximity, valid test scores, and school level. An initial step in the matching procedure sorted each school choice option into three school levels. Elementary, middle, and high schools were the school levels used to divide each of the charter and traditional public school choice options.

Following the arrangements of school choice options by school level, each of the charter and traditional public schools were aligned using proximity data. Charter and traditional public schools were matched using zip codes. The zip code matching was a limitation because some schools had an uneven number of schools assigned to each zip code in the school choice category. Schools that did not have the same zip codes were matched with zip codes that were in neighboring proximity. Once schools were aligned by school level and proximity, charters and traditional public schools were matched through aligning the number of valid test scores with schools in close geographical proximity. Though the original aim was to match 24 charter schools to 24 traditional public schools, 20 charters and 20 traditional public schools were matched. The four charter schools with available data were excluded due to proximity because there were no neighboring zip codes in alignment with school level for each excluded school choice option to be matched. Following the matching procedures, a sample of 1,161 charter and 3,499 traditional public school valid tests were included for analysis ($n = 4,660$).

Descriptive Statistics

Table 1 displays descriptive statistics for 20 charter school samples used in the two-way ANOVA. Descriptive statistics in the table include schools, valid tests, number, and percentage of tests that met the exit criteria per WIDA ACCESS testing standards, grades served at each

school, and zip codes. A total of 1,161 valid test scores were included in the study with 267 students meeting the exit criteria. School names were coded for confidentiality.

Table 1

Descriptive Statistics – Samples for Comparison of Charter Schools

School	Valid test (n)	Met exit criteria (n)	Met exit criteria (%)	Grades	Zip
CH1	43	8	18.6	K, 1, 2, 3, 4	37115
CH2	71	12	16.9	K, 1, 2, 3, 4	37207
CH3	178	35	19.7	K, 1, 2, 3, 4	37217
CH4	25	12	48	K, 1, 2, 3, 4, 5	37216
CH5	78	13	16.7	5, 6, 7, 8	37013
CH6	49	14	28.6	5, 6, 7, 8	37013
CH7	31	7	22.6	5, 6, 7, 8	37103
CH8	40	7	17.5	6, 7, 8	37115
CH9	26	2	7.7	5, 6, 7, 8	37209
CH10	188	54	28.7	5, 6, 7, 8	37210
CH11	111	23	20.7	5, 6, 7	37211
CH12	47	7	14.9	5, 6, 7, 8	37211
CH13	30	9	30	5, 6, 7, 8	37211
CH14	58	12	20.7	5, 6, 7, 8	37216
CH15	36	13	36.1	5, 6, 7, 8	37217
CH16	18	2	11.1	9, 10, 11	37207
CH17	19	1	5.3	9, 10, 11, 12	37013
CH18	11	1	9.1	9, 10, 11, 12	37207
CH19	48	16	33.3	9, 10, 11, 12	37210
CH20	54	19	35.2	9, 10, 11, 12	37210
Total	1161	267			

Descriptive statistics for traditional public schools are displayed in Table 2. Statistical data for traditional public schools in the sample used for comparison include schools, valid test scores, number and percentage of students who met the exit criteria, grades, and zip codes used to match schools within geographical proximity. A total of 3,499 valid test scores were included in the sample. A total of 473 students out of the 3,499 valid tests met the exit criteria. Traditional public-school names were coded to conceal the identity of the schools used in the study.

Table 2*Descriptive Statistics – Samples for Comparison of Traditional Public Schools*

School	Valid test (n)	Met exit criteria (n)	Met exit criteria (%)	Grades	Zip
TPS1	40	4	10	Pre-K, K, 1, 2, 3, 4	37115,
TPS2	76	4	5.3	Pre-K, K, 1, 2, 3, 4	37207
TPS3	237	33	13.9	Pre-K, K, 1, 2, 3, 4	37217,
TPS4	34	5	14.7	Pre-K, K, 1, 2, 3, 4	37216
TPS5	221	39	17.6	5, 6, 7, 8	37013
TPS6	185	23	12.4	5, 6, 7, 8	37013
TPS7	173	25	14.5	5, 6, 7, 8	37013
TPS8	66	10	15.2	5, 6, 7, 8	37115
TPS9	18	2	11.1	5, 6, 7, 8	37209
TPS10	105	31	29.5	5, 6, 7, 8	37210
TPS11	435	53	12.2	5, 6, 7, 8	37211
TPS12	251	30	12	5, 6, 7, 8	37211
TPS13	103	21	20.4	5, 6, 7, 8	37211
TPS14	21	2	9.5	5, 6, 7, 8	37216
TPS15	155	40	25.8	5, 6, 7, 8	37013
TPS16	123	11	8.9	9, 10, 11, 12	37214
TPS17	305	52	17	9, 10, 11, 12	37013
TPS18	78	4	5.1	9, 10, 11, 12	37205
TPS19	356	38	10.7	9, 10, 11, 12	37013
TPS20	517	46	8.9	9, 10, 11, 12	37220
Total	3499	473			

Two-Way Analysis of Variance

Two-way ANOVA is an extension of the one-way ANOVA statistical test. To examine the research hypothesis, a two-way ANOVA was performed in SPSS to examine any interactions in student performance in charter and traditional public (independent variables) schools measured on the WIDA ACCESS examination (dependent variable). The main purpose of two-way ANOVA is to understand any relationships among dependent variables and independent

variables in a research study.

Table 3 provides descriptive statistics displaying the school choice options and school types used in the ex post facto comparative analysis. Charter and traditional public school choice options are evenly matched. Descriptive statistics display a difference in school types between elementary, middle, and high. School choice options for charter and traditional public schools display the total number of each school choice option used in the study. The number of school types used in the two-way ANOVA is succeeding the school choices.

Table 3

Descriptive Statistic - School Choice and School Type Between Subject Factors

		<i>N</i>
School choice	Charter	20
	Traditional	20
School type	Elementary	8
	High	10
	Middle	22

The first assumption of the two-way ANOVA was met because the dependent variable is measured at a continuous level (ACCESS for ELLs interpretive score guide, 2022). Table 4 provides descriptive statistics used in the two-way ANOVA. Descriptive statistics are displayed by school choice and school type. Mean, standard deviation, and number of schools used in the two-way ANOVA are provided in Table 4. The total number of schools, mean, and standard deviations are displayed, providing the descriptive statistics for the total charter and traditional public schools used in the study.

Table 4*Two-Way ANOVA Descriptive Statistics: School Choice by School Type*

School choice	School type	Mean	Std. deviation	N
Charter	Elementary	25.800	14.8448	4
	High	18.800	14.2727	5
	Middle	22.200	8.1105	11
	Total	22.070	10.8653	20
Traditional	Elementary	10.975	4.3046	4
	High	10.120	4.3545	5
	Middle	16.382	6.4121	11
	Total	13.735	6.1365	20
Total	Elementary	18.387	12.8522	8
	High	14.460	10.9496	10
	Middle	19.291	7.7310	22
	Total	17.903	9.6785	40

The two independent variables, participation, and school level met the second assumption of two-way ANOVA. Participation consisted of two categorical variables (charter schools and traditional public schools). School level had three categorical variables (elementary school, middle school, and high school). Assumption three in the two-way ANOVA required an independence of observation. An independence of observation in the two-way ANOVA meant there could not be an existing relationship between the observations in each group used in the study. This assumption was met because no relationship existed between the school choices. Valid test scores are either in charter schools or no public schools, but not in both groups.

Test for Outliers

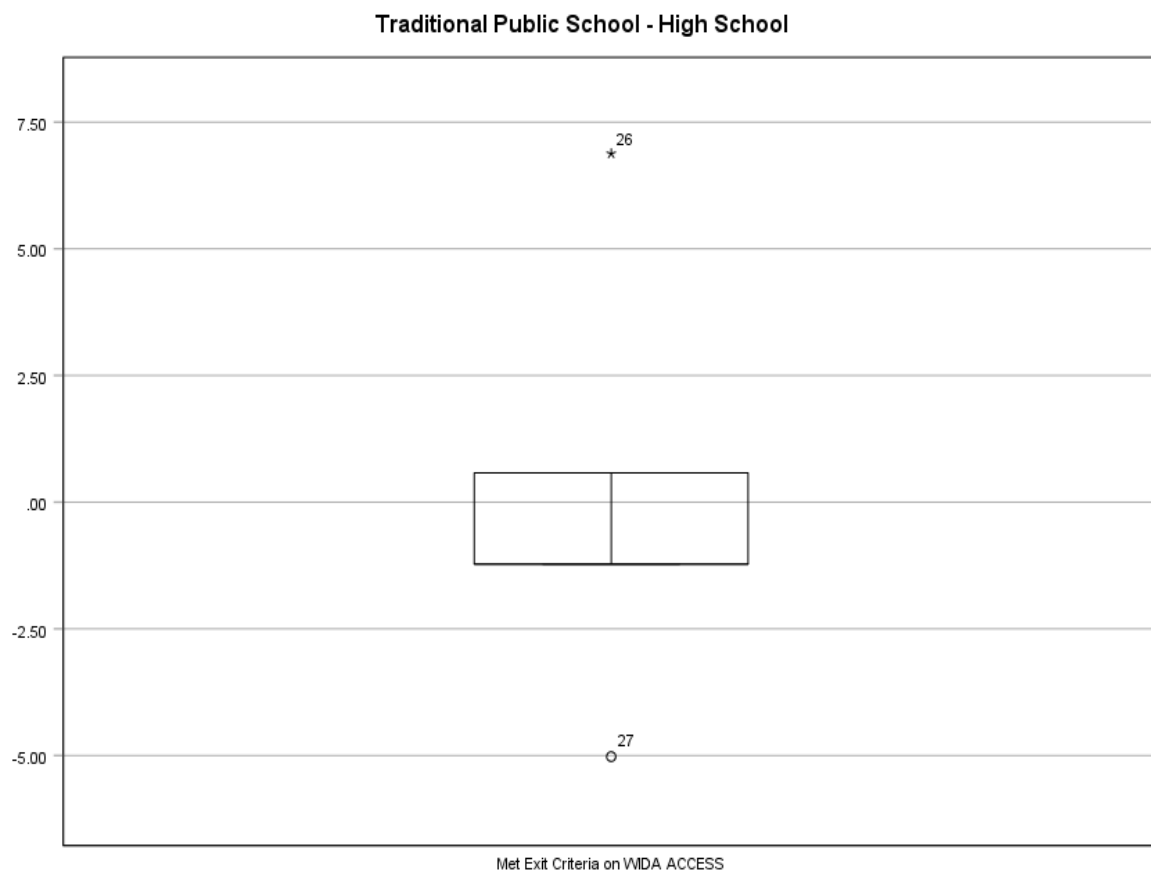
Assumption four of the two-way ANOVA expressed there should be no significant outliers in any cell of the design (Two-way ANOVA in SPSS statistics, 2018). Outliers are data points that do not follow the usual pattern (Two-way ANOVA in SPSS statistics, 2018). The

SPSS tests for outliers revealed there were significant outliers and one extreme outlier. Outliers were a violation of assumption four in two-way ANOVA.

Figure 1 displays the outliers found for the traditional public-school choice. The school type displayed in Figure 1 is high school. A significant outlier is 27. An extreme outlier is 26. The significant outlier and extreme outlier revealed a clear violation of assumption four, which required that there be no outliers.

Figure 1

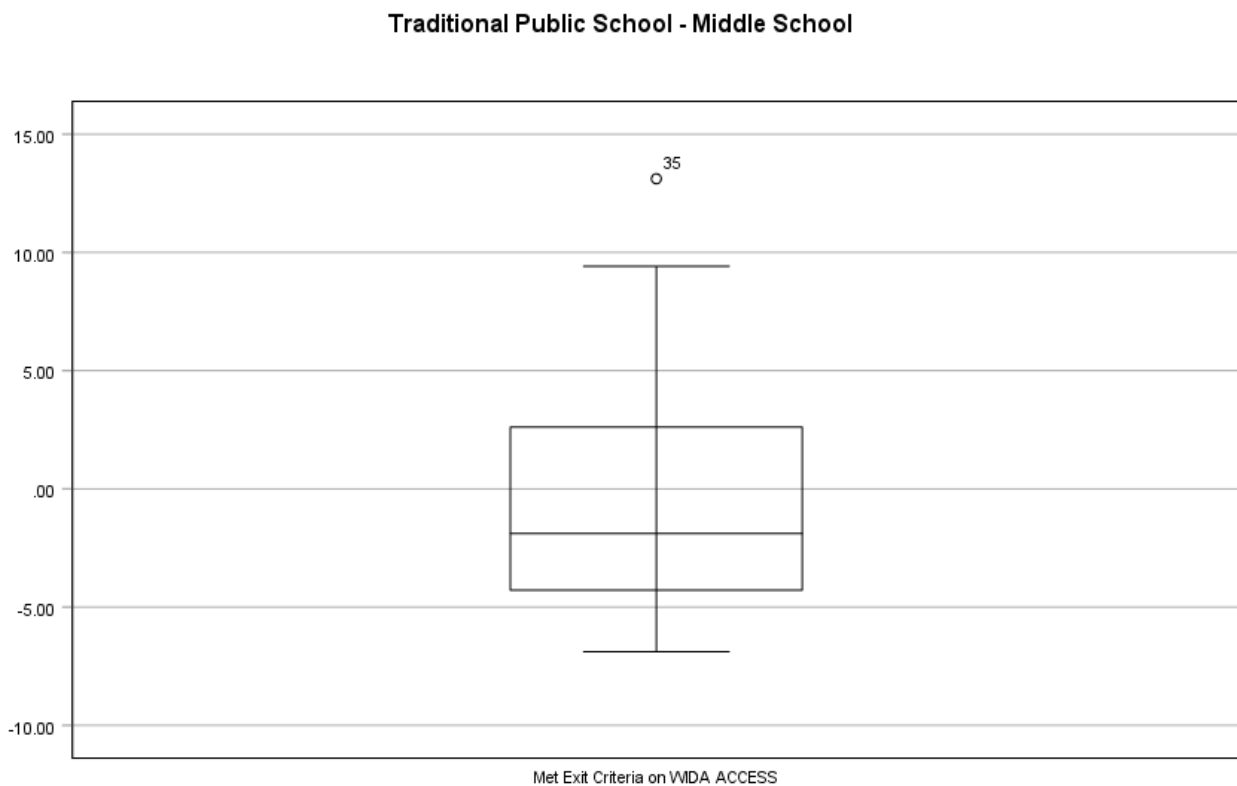
Outliers: Traditional Public School – High School Level



Outliers for the middle school type in the traditional public-school choice are shown in Figure 2. A significant outlier of 35 is identified in Figure 2. The significant outlier violated assumption four of two-way ANOVA.

Figure 2

Traditional Public School – Middle School Level



Shapiro-Wilk Test for Normality

To assess the assumption of normality, the Shapiro-Wilk test for normality was used to test for the normal distribution of the dependent variable. Shapiro-Wilk's test for normality is a test recommended for smaller sample sizes. Table 5 presents the results from the test that examined the six groups distributed among the two independent variables of school type and school choice.

Table 5*Shapiro-Wilk Test for Normality*

School		<u>Kolmogorov-Smirnov^a</u>			<u>Shapiro-Wilk</u>		
choice	School type	Statistic	df	Sig.	Statistic	df	Sig.
Charter	Elementary	.409	4	.	.703	4	.013
	High	.305	5	.144	.811	5	.100
	Middle	.149	11	.200*	.977	11	.944
Traditional	Elementary	.252	4	.	.909	4	.478
	High	.247	5	.200*	.918	5	.516
	Middle	.209	11	.193	.873	11	.084

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Charter schools that serve elementary school students who participated in WIDA ACCESS had a p -value of .013. Charter schools that serve high school students who participated in WIDA ACCESS had a p -value of .100. Students in charter schools at the middle school level had a p -value of .944. Since the results of the Shapiro Wilk displayed that the p values for charter school choice for each of the three school type groups were greater than .05, all three groups were normally distributed. A normal distribution among the schools indicated that most of the school choices fell in the center of the distribution.

Traditional public schools that serve elementary school students who participated in WIDA ACCESS had a p -value of .78. Traditional public schools that serve high school students who participated in WIDA ACCESS had a p -value of .516. Students in traditional public schools

at the middle school level who participated in WIDA ACCESS had a p -value of .084. Since the results of the Shapiro-Wilk displayed that the p -values for the traditional public-school choices for each of the three school type groups were greater than .05, all three school type groups were normally distributed. Data were normally distributed, as assessed by the Shapiro-Wilk test.

Levene's Test for Homogeneity

Two-way ANOVA equality in group combinations among population variances.

Levene's test of equality of error variances was used to test the sixth assumption, the assumption of homogeneity of variances for the ex post facto study of charter and traditional public-school performance on WIDA ACCESS. Table 6 displays the results from Levene's test of equality of error variances. The assumption of homogeneity of variances was violated based on the mean significance, as assessed by Levene's test for equality of variances, $p = .004$.

Table 6

Levene's Test of Equality of Error Variances

	Levene's statistic	df1	df2	Sig.
Based on Mean	4.292	5	34	.004
Based on Median	.974	5	34	.448
Based on Median and with adjusted df	.974	5	13.850	.467
Based on trimmed mean	3.844	5	34	.007

Note. Tests the null hypothesis that the error variance of the dependent variable was equal across groups.

a. Dependent variable: pct_met_exit_criteriaNEW

b. Design: Intercept + schoolchoice + schooltype + schoolchoice * schooltype

Assumptions four and six of the two-way ANOVA were both violated. There were outliers that SPSS revealed in traditional high school (*²⁶, o²⁷) and middle school (o³⁵). Levene's

test of equality of error variances displayed a p -value of .004 ($p = .004$). A $p < .05$ indicates the assumption of homogeneity of variances was violated. The decision was made to continue parametric analysis despite the assumption violations due to the somewhat robust nature of the two-way ANOVA; however, findings must be interpreted with caution.

Findings

Findings of the two-way ANOVA are displayed by research questions. Participation in access among levels in charters and traditional public schools is presented for Research Question 1. Differences in school level are displayed for Research Question 2 and an interaction of participation and school-level results are provided to address Research Question 3.

Research Question 1 asked what is the statistically significant difference in ELL academic performance by participation in charter and traditional public schools? The hypotheses were:

H1_o: No statistically significant difference exists in WIDA ACCESS scores of ELL students attending charter and traditional public schools.

H1_a: A statistically significant difference exists in WIDA ACCESS scores of ELL students attending charter and traditional public schools.

Table 7 displays the result of a two-way ANOVA analyzing statistical differences in charter and traditional public-school participation. There was no statistically significant difference in the percentage of students who met the exit criteria in charter schools, $F(2, 34) = .694$, $p = .506$.

There was no statistically significant difference in students who met the exit criteria in traditional public schools, $F(2, 34) = 1.098$, $p = .345$. Failure to reject the null hypothesis indicated no statistically significant difference was identified between charter and traditional public school

(participation) and the percentage of students who successfully met the exit criteria on WIDA ACCESS.

Table 7

Charter and Traditional Public-School Participation in WIDA ACCESS

School		Sum of	df	Mean	F	Sig.	Partial	Noncent.	Observed
choice		squares		square			eta	parameter	power ^a
							squared		
Charter	Contrast	109.302	2	54.651	.694	.506	.039	1.389	.157
	Error	2676.332	34	78.716					
Traditional	Contrast	172.874	2	86.437	1.098	.345	.061	2.196	.227
	Error	2676.332	34	78.716					

Note. Each *F* tests the simple effects of school type within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = .05

Research Question 2 asked what is the statistically significant difference in ELL academic performance by school level in charter and traditional public schools? The hypotheses were:

H2_o: No statistically significant difference exists in WIDA ACCESS scores for ELL students between elementary, middle, and high school levels.

H2_a: A statistically significant difference exists in WIDA ACCESS scores for ELL students between elementary, middle, and high school levels.

Table 8 displays the results of the statistical evaluation of Research Question 2.

There was a statistically significant difference in the percentage of students who met the exit criteria on the WIDA ACCESS examination in charter and traditional public schools at the elementary school level, $F(1, 34) = 5.58, p = .024$. There was no statistically significant difference and percentage of students who met the exit criteria on the WIDA ACCESS examination in charter and traditional public schools at the high school level, $F(1, 34) = 2.39, p = .131$. There was no statistically significant difference and percentage of students who met the exit criteria on the WIDA ACCESS examination in charter and traditional public schools at the middle school level, $F(1, 34) = 2.37, p = .133$. To reject the null hypothesis indicated a statistically significant difference was identified in school level of percentage of students who successfully met the exit criteria for WIDA ACCESS.

Table 8

School-Level Differences (Elementary, Middle, & High) in WIDA ACCESS

School type		Sum of squares	df	Mean square	F	Sig.	Partial eta squared	Noncent. parameter	Observed power ^a
Elementary	Contrast	439.561	1	439.561	5.584	.024	.141	5.584	.632
	Error	2676.332	34	78.716					
High	Contrast	188.356	1	188.356	2.393	.131	.066	2.393	.324
	Error	2676.332	34	78.716					
Middle	Contrast	186.182	1	186.182	2.365	.133	.065	2.365	.321
	Error	2676.332	34	78.716					

Note. Each F tests the simple effects of school choice within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using $\alpha = .05$

Research Question 3 asked does an interaction effect of participation and school level exist in WIDA ACCESS scores for ELL students? The hypotheses were:

H3_o: No interaction effect of participation in charter and traditional public schools and elementary, middle, and high school level exists in WIDA ACCESS scores for ELL students.

H3_a: An interaction effect of participation in charter and traditional public schools and elementary, middle, and high school level exists in WIDA ACCESS scores for ELL students.

Table 9 displays the results of the two-way ANOVA conducted in SPSS to examine the research question and address the research hypothesis. There was no statistically significant interaction between school type and school choice in percentage of students who met the exit criteria on WIDA ACCESS, $F(2, 34) = .758, p = .476$, partial $\eta^2 = .043$. Failure to reject the null hypothesis indicated no interaction effect existed between school type and school choice that could affect participation (charter vs. traditional public) and school level (elementary, middle, and high) in the percentage of students who successfully met the exit criteria.

Table 9*Charter and Traditional Public Interaction of Participation and School Level*

Source	Type III sum of squares	df	Mean square	F	Sig.	Partial eta squared	Noncent. parameter	Observed power ^b
Corrected Model	976.898a	5	195.380	2.482	.051	.267	12.410	.706
Intercept	10051.278	1	10051.278	127.691	<.001	.790	127.691	1.000
schooltype	162.799	2	81.399	1.034	.366	.057	2.068	.215
schoolchoice	794.818	1	794.818	10.097	.003	.229	10.097	.870
schooltype * schoolchoice	119.377	2	59.688	.758	.476	.043	1.517	.168
Error	2676.332	34	78.716					
Total	16473.210	40						
Corrected Total	3653.230	39						
Corrected Model	976.898a	5	195.380	2.482	.051	.267	12.410	.706

a. R Squared = .267 (Adjusted R Squared = .160)

b. Computed using alpha = .05

Reliability and Validity

SPSS was used to conduct the two-way Analysis of Variance (ANOVA) of aggregated data (Data downloads & request, 2019; Mishra et al., 2019). Aggregated data displayed percentages of students that met the exit criteria on the WIDA ACCESS examination. The control variable in the comparative analysis was the WIDA ACCESS exam. Aggregate school-level data are a widely used resource in academia, which provides a promise to applied education researchers (Hallberg et al., 2018).

The WIDA ACCESS examination is provided to students identified as ELLs in grades kindergarten through 12, and it is the most widely used resource for teachers who support multilingual learners (World-class instructional design and assessment for ELLs, 2018). WIDA

meets the federal requirements of Every Student Succeeds Act and is used to supervise and report progression towards meeting English language development (World-class instructional design and assessment for ELLs, 2018). Two-way ANOVA was an appropriate parametric test to conduct the analysis, which examined statistically significant differences in charter and traditional public schools within the selected southeastern school district.

Two-way ANOVA is a robust parametric statistical test. There were two threats to internal validity. Withdrawing the use of ArcGIS to match schools using spatial statistics was an identified threat. The threat was addressed by matching schools using locational proximity by zip codes.

An additional unexpected threat to internal validity was the decision to include the number of valid test scores as a matching procedure. Inclusion of the amount of valid test scores that each school choice option used helped strengthen the matching process. The amount of traditional public schools heavily outnumbered charter schools in the large, selected southeastern district. Using this matching criterion helped match the schools that had multiple school choice options in the same zip codes.

A total of 20 charter schools and 20 traditional public schools were used in the study. Though there were 24 charter schools with available data for the analysis, four of the charter schools were excluded due to matching procedures. Three of the four charters were excluded because they were not within proximity of three traditional public schools. One of the charter schools was excluded due to there being more than one matching traditional public school within the same proximity. This threat to external validity was addressed by ensuring that the 20 matched charter schools and 20 traditional public schools remained paired using grade level,

proximity, and number of valid test scores.

Chapter Summary

An introduction was provided in Chapter 4, followed by an overview of the data collection procedures. Descriptive and inferential analyses were conducted to analyze the data in the study. Two-way ANOVA is a parametric statistical test that was used to examine the research questions and hypotheses (Two-way ANOVA in SPSS statistics, 2018). Statistical Package for the Social Science (SPSS) was used to complete the two-way ANOVA used to examine the research questions and address the hypotheses.

Public data were collected from the selected school district's website (see Appendix B). The statistical data were organized for analysis into an Excel spreadsheet. Matching procedures were used to pair 20 charter schools and 20 traditional public schools, using valid test scores, proximity, and grade levels as matching criteria. Descriptive statistics were displayed.

The test for outliers was conducted using SPSS. Traditional high school and traditional middle school had outliers. Shapiro Wilk revealed that the statistical data were normally distributed. Levene's test for homogeneity revealed a violation. The decision was made to proceed with caution with the analysis despite the outliers and violation of homogeneity due to the robust nature of two-way ANOVA (Mair & Wilcox, 2020).

Analyses for Research Question 1 revealed no statistically significant differences in charter and traditional public school (participation) in the percentage of students who met the exit criteria on the WIDA ACCESS examination. Two-way ANOVA displayed a small difference between school level (elementary, middle, and high) in the percentage of students who successfully met the exit criteria in WIDA ACCESS for Research Question 2 at the elementary

school level. A statistical analysis using two-way ANOVA revealed no interaction effect of participation (charter vs. traditional public schools) and school level (elementary, middle, and high) in Research Question 3. No identified statistically significant differences led to failure to reject the null hypothesis in each of the three research questions. A discussion and conclusion of the research data which were collected and analyzed in Chapter 4 are provided in Chapter 5.

Chapter 5: Discussion and Conclusion

The purpose of the quantitative, ex post facto study was to investigate academic performance among ELLs to determine whether statistically significant differences existed between participation in charter and traditional public schools and between elementary, middle, and high school levels through a review of World-Class Instructional Design and Assessment (WIDA) ACCESS scores for 20 charter schools and 20 traditional public schools in a large metropolitan southeastern school district. There were no statistically significant differences between the charter and traditional public schools on the WIDA ACCESS examination as asked in Research Question 1. In Research Question 2, a statistically significant difference of .024 was revealed at the elementary school level. No statistically significant differences were detected at the middle and high school levels. Research Question 3 showed no statistically significant interactions in school choice and school level with students who met the exit criteria.

Findings, interpretations, and conclusions are provided in Chapter 5. A review of the limitations of the study is succeeded by recommendations and implications for leadership. Final conclusions of the research study are presented in the last section of this chapter.

Findings, Interpretations, Conclusions

The study of English language learners' performance in charter and traditional public schools was in response to the need for research on school choice and a call to action for future research into the area of school choice (Maranto & Vasile, 2018). Literature displayed mixed results regarding charter school performance in contrast with traditional public schools. Although there was a noticeable gap in studies regarding English language learners and school choice options, there were studies in the literature that either supported or opposed charters as being a

plausible alternative to traditional schools (Flanders, 2017; Kalulu et al., 2017; Orfield & Luce, 2016; Sahin et al., 2017; Winters et al., 2017).

A quantitative research study by Flanders (2017) of charter school performance in Milwaukee, Wisconsin, schools concluded that while some charter schools performed similarly to traditional public schools, other charters outperformed traditional public schools. The mixed results from the study by Flanders (2017) aligned with the research results in the quantitative, ex post fact study because the study concluded that there were no statistically significant performance differences in charters and traditional public schools. The absence of statistically significant differences in participation and school level in the quantitative, ex post facto study supported the conclusion of charters performing like traditional public schools, while also contradicting findings that some charters outperformed traditional public schools (Flanders, 2017).

Results from this study also were different from the findings of a quantitative study conducted by Sahin et al. (2017), which statistically analyzed performance differences in charters and traditional public schools in Denver, Colorado, and New York City, New York. Study results from the quantitative comparative analysis by Sahin et al. (2017) concluded that the matched 12 charter schools outperformed the 32 traditional public schools. These results from the study of charter and traditional public schools in New York and Denver differed from the quantitative findings from the selected, large metropolitan southeastern school district that concluded both charters and traditional public schools statistically performed similarly.

In addition to the studies by Flanders (2017) and Sahin et al. (2017), a study of charter and traditional public schools presented by Clarke and Burt (2019) concluded that performance

differences between the two school choice options were inconclusive. Inadequate results from the ANOVA and t-test used in the statistical analysis in the midwestern state's midsize urban school districts differed from the statistical interpretations of the quantitative, ex post facto study which concluded there were no differences in participation and school level between school choice options. The conclusion reached by Clarke and Burt (2019) that the statistical trends analyzed in the study using ANOVA and t-test needed additional investigation displayed that replicating studies like the quantitative, ex post facto study conducted in the large southeastern school district may be used to reach a conclusive decision.

Results from the quantitative, ex-post facto provided in-depth statistical information that charter, and traditional public schools are each rational choices for English language learners. The theoretical framework was used to guide the course of research and grounded the research in theoretic conception and established credibility (Adom et al., 2018). Rational choice theory was used in the theoretical framework as a basis to establish an understanding of which school choice option would be considered logical for English language learner students (Scholtz, 2015). Contingency theory of leadership aligns with rational choice theory in the theoretical framework by providing insight that English language learners are given the same WIDA ACCESS examination measured on the same scale but receive academic instruction in two different environments.

Rational Choice Theories

Rational choice theory is described by Scholtz (2015) as a logical decision being made by an individual or group of entities because every action is viewed as a choice. This theory is a relevant option used to form and analyze a quantifiable optimization problem using mathematical

tools (Scholtz, 2015). The quantitative, ex post facto study results will provide parents, students, school district leaders, and stakeholders with statistical support to assist in making a rational choice regarding the best school choice option for English language learners. Using the two-way ANOVA statistical test aligned with the views of Scholtz (2015) that rational choice theory is used to evaluate quantitative data while providing an explanation of theoretical narratives for statistical symmetricalness. A two-way ANOVA conducted using SPSS was applied to statistically evaluate the hypotheses used to answer the three research questions in this study. Data used in the two-way ANOVA were tested for assumptions using a test for significant outliers, the Shapiro-Wilk test for normality to test data for a normalized distribution between variables, and Levene's test for homogeneity for consistency. Once the data used in the study were tested for assumptions, the two-way ANOVA was conducted on each research question in sequential order.

These findings concluded that both charter and traditional public schools in the large metropolitan district in the Southeast would be a rational choice for English language learners to attend. Both school choice options provide an environment that would facilitate instruction, so students would have an even chance at meeting the exit criteria on the WIDA ACCESS examination.

Contingency Theories of Leadership

Contingency theory is the notion that the type of leadership used in a situation should be conditioned on specific variables in the environment (Khan & Nawaz, 2016). According to Khan and Nawaz, variables such as the quality and situation of followers influence the leadership style used in each environment.

Charter and traditional public schools are different environments within the selected southeastern district that serve English language learners. Environmental variables used in the quantitative, ex post facto study included school choice and school level as displayed in Research Question 3. English language learners in charter and traditional public schools received school-level appropriate academic instruction aligned with the learner's specific grade level. Students in kindergarten through fifth grade in charter schools and traditional public schools received instruction to support the learner in meeting the exit criteria on the WIDA ACCESS examination at the elementary school level. Similarly, middle school English language learners in Grades 6 through 8, and high school students in Grades 9 through 12 in charter and traditional public schools received different academic preparation to reach educational goals because the grade levels were different.

The absence of statistically significant differences at the middle school and high school levels revealed that there were no differences in the number of students who met the exit criteria in charter and traditional public schools in Grades 6 through 8 and Grades 9 through 12. A statistically significant difference at the elementary school level showed a difference in students in the two school choice options who were successful in meeting the WIDA ACCESS exit criteria on the examination.

Limitations

The quantitative, ex post facto study had threats to internal validity including the decision to withdraw using ArcGIS to match schools used in the two-way ANOVA. Withdrawing the use of spatial statistics software was a threat to the matching of charter and traditional public school choice options. Spatial statistic software was withdrawn because the school choice options could

be matched by proximity using zip codes.

Another threat to internal validity was the decision to include the number of valid test scores in the matching process. Test score inclusion was a threat to validity because this addition deviated from the original variables identified in the initial matching process. This threat to internal validity was determined to be a strengthening factor that made the matching process more robust.

This study originally sought to match 24 charters to 24 traditional public schools in the selected, large southeastern school district. One threat to external validity was the decision to match 20 charter schools to 20 traditional public schools, excluding four charters and four traditional public schools from the study. The decision for the exclusion was based on proximity based on zip codes. Three of the four charter school choice options were excluded due to there being no matching traditional public schools within a reasonable proximity. The charters schools had no traditional public schools within two neighboring zip codes. One charter school choice option was excluded due to there being more than one traditional public school within its proximity. Threats to external validity regarding this part of the matching process were addressed by ensuring the 20 charters and 20 traditional public schools remained matched using proximity, grade level, and number of valid test scores.

In addition to threats to internal and external validity, there were a few limitations to the reliability of the data for the study. One limitation was the use of archival data. Archival data were a limitation in the quantitative, ex post facto study because the data sample of charter and traditional public schools were conditioned on availability.

Another limitation was that a convenient sample was taken from the selected school

district in the Southeast to be used in the two-way ANOVA, which is a nonprobability sampling technique. This limitation was necessary due to the nature of the comparative study that specifically targeted the test score data specific to the English language learner student demographic.

A final limitation related to the reliability of the data collected was the uneven samples. Traditional public schools outnumbered charter schools in the selected, large southeastern metropolitan school district used in the quantitative analyses. This limitation was addressed by using strict matching criteria that included proximity, valid test scores, and grade level.

The findings of this quantitative, ex post facto study are generalizable to English language learner student populations within the charter and traditional public school choice options because WIDA is an examination used to assess English language learner proficiency. Additionally, the research study findings are generalizable to a specific select large school district in the Southeast, but the study may be replicated in districts across the nation using the same methodology. Two-way ANOVA can be used in other school districts to statistically analyze English language learner performance in charters and traditional public schools. The three research questions can be used to examine the same dependent and independent variables within the selected school district in which the study is being duplicated. Research findings would benefit literature analyzing how any statistically significant differences compared to this study and other similar research.

Recommendations

Future research may include duplicating this study in other school districts to evaluate English language learner performance in charter and traditional public schools. School districts

that serve English language learner student populations in other regions can replicate this study by using two-way ANOVA. Statistical analysis would provide the district leadership with the quantitative data needed to build improvements for English language learners and have a better understanding of how charter and traditional public school choice options serve the student population.

Qualitative research gives insight and understanding of the problem setting (Ahmad et al., 2019). In addition to replicating this quantitative, ex post facto study, future research should include qualitative studies further analyzing specific English language learning course curriculum differences in charters and traditional public schools. Qualitative examinations should be analyzed at the school level by teachers, researchers, administrators, and ESL-endorsed professionals. Future research should emphasize understanding how the WIDA ACCESS preparatory academic instruction in the charter and traditional public-school choices at each school level affect the outcomes of students who can meet the exit criteria. A deeper understanding from a qualitative view will allow school districts to adjust academic instruction accordingly in each educational setting to better meet the needs of the fast-growing English language learner student population.

A clear absence of statistically significant interaction between participation and school level is an indication to parents that students have an equal chance at gaining the education needed to successfully meet the exit criteria on the WIDA ACCESS examination at charter and traditional public schools in the large southeastern school district. Basic Education Program (BEP) using the school funding formula in the large southeastern school district in this study does not provide adequate financial resources to support the state's school system. School

districts should set aside or request funding and additional resources to support English language learner performance in charter and traditional public schools. The school board should use this study and similar studies as supporting justification to draft proposals to request more state funding for English language learner programs.

Hiring more ESL education professionals who are assigned to help English language learners meet academic goals is another recommendation. Policy changes should require schools to have a certain amount of ESL-endorsed educators per number of students classified as English language learners (Ruecker, 2021). Requested increase in state funds to support the fast-growing English language learner student population in charter and traditional public schools' settings should include funding to cover English as a second language, endorsed professionals, teachers, and social support needed to assist students in becoming proficient in English and meeting the exit criteria on the WIDA ACCESS.

Charter and traditional public-school administrators should re-evaluate resources allocated for English language learner development. Alignment of resources in each school choice option serving English language learners should exist between the number of ESL-endorsed education professionals and students classified as English language learners. These changes should be implemented with transparency among both school choice options to ensure each option remains a rational choice for parents and students.

Implications for Leadership

Effective leadership is the second most significant school-based variable having a direct influence on student outcomes (Bush, 2021). Results from the quantitative, ex post facto study will be distributed to leadership in the large southeastern school district where the study was

conducted. The state board of education, school boards association, metropolitan board of public education, school principals, and superintendents of the schools used in the study will be provided with the findings from the study.

With these findings, leaders should be able to explain to parents in this large southeastern school district they can enroll child(ren) in either a charter or traditional public school and have similar educational experience in reaching the goal of passing the WIDA ACCESS examination. Results indicate to leadership that English language learner programs in charters and traditional public schools perform similarly and provide similar opportunities of support to English language learners. Academic resources and ESL professionals are supports that each school choice setting provides to English language learners. A focus should be put on strengthening English language learner programs in charter and traditional public schools using a unified approach to policy implementation. The integrated approach should include collaboration among district leaders to produce a policy that distributes the same instruction preparing English language learners to meet the exit criteria in charter schools and traditional public schools.

Another implication to leadership is that school leaders should consider allocating additional funding to support English language learners' success initiatives. The school district should use the allocated funds to provide supplementary materials, such as language learning software, asynchronous learning platforms, and high-quality textbooks (Hamidova & Ganiyeva, 2020). United States Department of Education Office of English Language Acquisition provides leadership which helps ensure that English learners attain English proficiency and achieve academic success (OELA, 2022).

Purchasing licenses for innovative, scientifically proven software such as Rosetta Stone,

Babble, and Duolingo would help English language learners achieve a higher level of proficiency (Jiang et al., 2021). In addition to increasing the learner's efficiency, the language software will also improve the students' chances of successfully meeting the standards. School-level leadership should thoroughly examine the potential benefits that language learning software like Rosetta Stone could provide to English language learners and align them with specific objectives listed on the WIDA ACCESS Standards by school level (Namaziandost et al., 2021). Using the WIDA ACCESS standard curriculum and classroom instruction as a primary resource and language learning software as a secondary resource would strengthen the educational experience of the students in the English language learner programs in both charter and traditional public schools (Jiang et al., 2021)

In addition to high-quality language learning software, school leaders should consider purchasing licenses to asynchronous learning platforms. Udemy is an example of a type of asynchronous learning platform that leadership should consider as a supplementary resource to traditional academic instruction (Cetina et al., 2018). These asynchronous platforms are always accessible through applications on mobile devices and websites to English language learners and can be accessed during and after school hours by students.

Language learning software and asynchronous courses should also be accessible to the students and teachers through mobile devices (Andujar et al., 2020). This is an implication to leadership that providing funding for students who demonstrate a need should be allocated to purchase iPads or alternative devices to support access to these resources. Further implications can be interpreted that since charters and traditional public schools perform similarly in service to English language learners, a strategy that implores the use of language software and

asynchronous instruction should be adopted and implemented in both learning environments.

Conclusion

Garcia and Morales (2016) expressed a need for future research addressing the literature gap regarding school choice and educational opportunities for English language learners. To address the literature gap, a study was conducted to explore and analyze any statistically significant differences in English language learner performance in charter and traditional public-school choice options for a large metropolitan school district in the Southeast.

A review of literature provided theoretical insight and synthesized the literature surrounding school choice options. A theoretical framework was used to ground the study in theoretical conception while establishing credibility. A review of literature provided a detailed overview describing charters as the fastest growing alternatives to traditional public schools as a school choice (DeAngelis, 2018; Flanders, 2017; Kalulu et al., 2017; Maranto & Vasile, 2018; Mavrogordato & Harris, 2017; Sahin et al., 2017; Shin et al., 2017; Winters et al., 2017). The quantitative, ex post facto study sought to address the noticeable gap in the literature surrounding studies that statistically analyzed English language learner performance in charter and traditional public schools.

Results of the two-way ANOVA displayed a statistically significant difference of .024 at the elementary school level in Research Question 2. No statistically significant differences were found at the middle school and high school level in Research Question 2. Research Questions 1 and 3 revealed no statistically significant differences. The study addressed the literature gap aligned with rational choice theory. Providing an analysis that examines how charters and traditional public schools perform through the lens of statistical significance provided parents

and students with the data needed to make a rational choice in the selection of a school choice option in this selected district.

Adjacently, contingency theories of leadership were used as an element of the theoretical framework. Contingency theories of leadership contest that the leadership style used is contingent on the specific variables in an environment (Khan & Nawaz, 2016). Charters and traditional public schools are two different school choice options. The school choice options have different grade levels with different policies which govern each school choice option. This study displayed that there was no statistically significant effect in participation and school choice in Research Question 3, a clear indicator that policies that govern charters and traditional public schools' preparation for English language learners to take the WIDA ACCESS examination provide comparable results.

Recommendations to charter and traditional public-school leadership were provided in Chapter 5. Future research in this area of English language learners' school choice should duplicate this quantitative statistical analysis to understand performance differences between charters and traditional public schools. Qualitative research analyzing specific curriculum differences at each school level within each school choice option should help in providing qualitative support and provide deeper insight for school leaders to build on. With an absence of statistically significant differences in effect and participation and school choice, school leaders should turn their attention to initiatives that can be used to strengthen English language learner programs and allot the resources needed to support efforts at an administrative level. Aligning academic instruction with an innovative, scientifically proven educational strategy should be a focal point of leadership for both school choice options.

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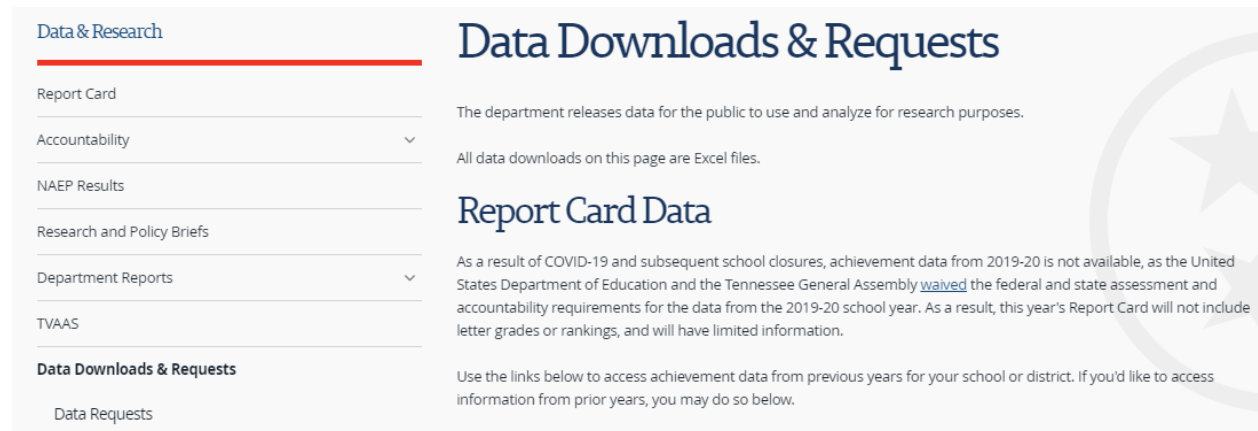
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Appendix A

Informed Consent Waived



Data & Research

Report Card

Accountability

NAEP Results

Research and Policy Briefs

Department Reports

TVAAS

Data Downloads & Requests

Data Requests

Data Downloads & Requests

The department releases data for the public to use and analyze for research purposes.

All data downloads on this page are Excel files.

Report Card Data

As a result of COVID-19 and subsequent school closures, achievement data from 2019-20 is not available, as the United States Department of Education and the Tennessee General Assembly [waived](#) the federal and state assessment and accountability requirements for the data from the 2019-20 school year. As a result, this year's Report Card will not include letter grades or rankings, and will have limited information.

Use the links below to access achievement data from previous years for your school or district. If you'd like to access information from prior years, you may do so below.

<https://www.tn.gov/content/tn/education/data/data-downloads.html>

Appendix B

English Language Proficiency Assessment

✓ English Language Proficiency Assessment

The WIDA ACCESS measures English learners' English language proficiency. Districts administer the assessment to all current English learners. Due to school closures, 2019-20 WIDA ACCESS data is limited and incomplete and cannot be meaningfully compared across districts or across time. Thus, there will be no public release of these data, as the United States Department of Education and the Tennessee General Assembly have [waived](#) the federal and state assessment and accountability reporting requirements for the data from the 2019-20 school year. Districts received WIDA data on July 16.

- [2019 District Level](#)
- [2019 School Level](#)
- [2018 District Level](#)
- [2018 School Level](#)
- [2017 District Level](#)
- [2017 School Level](#)

<https://www.tn.gov/content/tn/education/data/data-downloads.html>