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AN INVESTIGATION OF THE APPROPRIATENESS OF THE ENGLISH LANGUAGE
LEARNER ACCOUNTABILITY MARK ESTABLISHED BY THE EVERY STUDENT
SUCCEEDS ACT OF 2015

by

FRANCISCO G. RIVERA
B. A. University of Central Florida, 2011
M. Ed. University of Central Florida, 2015

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the School of Teaching, Learning, and Leadership
in the College of Community Innovation and Education
at the University of Central Florida
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Major Professor: Jerry Johnson

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ABSTRACT

This quantitative study sought to disclose and describe differences in academic performance between English language learners (ELLs) and non-English language learners (non-ELLs) in grades sixth, seventh, and eighth during the two-year period of 2016 – 2018. A two-year period was utilized because of the two-year ELL accountability mark established by the Every Student Succeeds Act (ESSA) of 2015. The study used *i-Ready* diagnostic data, in both mathematics and reading, as the performance measures, and used ACCESS for ELLs (WIDA) tier scores (i.e., WIDA Tier A, WIDA Tier B, and WIDA Tier C) to identify the level of English language acquisition of the ELL students for use in making comparisons among ELL students with varying levels of English proficiency.

The results indicated that WIDA Tier C (i.e., ELL students with the highest English language proficiency) students outperformed the ELL students in the other WIDA tiers (i.e., WIDA Tier A and WIDA Tier B), in both mathematics and reading. Moreover, while WIDA Tier A students had lower mean scale scores, they made the largest gains from administration to administration in both subjects. Additionally, the results obtained from a two-way ANOVA indicated that ELL students are making greater gains than non-ELL students over the two-year period, in mathematics and reading. The extant literature on second language acquisition asserts that it takes an ELL student longer than two years and up to seven years to acquire academic language proficiency (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016). The ANOVA results also indicated that high-SES ELL students showed a higher mean gain score, in both mathematics and reading, than low-SES ELL students. Non-ESE ELL students showed a larger mean gain score than ESE ELL students in both subjects as well. Furthermore, the results of the ancillary analysis (i.e., a hypothetical additional year) indicated

that non-ELL students outperformed ELL students in both mathematics and reading suggesting that it is unlikely that one additional year would make a difference.

The results of the study will aid the academic decision-making of the school district studied when determining the appropriate level of supports for ELL students in the different WIDA tiers or in the different stages of language acquisition. In addition, the results of the effects of socioeconomic status (SES) and of exceptional student education (ESE) in ELL students, should support the school district when planning interventions to help mitigate these factors. Lastly, the study provides further evidence that two years is not enough time for an ELL student to acquire academic language proficiency; and expecting this subgroup of the public-school population to do so, negatively affects the academic results of the students, schools, and school districts they attend.

To my wife (Allison) and children (Gabby and Gio), the fuel to my fire during this three-year journey.

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CHAPTER ONE: INTRODUCTION

Background of the Study

Since the first Bilingual Education Act, which was part of the Elementary and Secondary Education Amendments (ESEA) of 1967, the United States Congress has recognized the complexity of educating English language learners (ELLs). The law states that:

Congress hereby finds that one of the most acute educational problems in the United States is that which involves millions of children of limited English-speaking ability because they come from environments where the dominant language is other than English; that additional efforts should be made to supplement present attempts to find adequate and constructive solutions to this unique and perplexing educational situation; and that the urgent need is for comprehensive and cooperative action now on the local, State, and Federal levels to develop forward-looking approaches to meet the serious learning difficulties faced by this substantial segment of the Nation's school-age population. (Elementary and Secondary Education Amendments, 1967, p. 816)

Even though the United States Congress has recognized the complexity of educating ELLs, it passed legislation that is not responsive to second language acquisition research. The Every Student Succeeds Act of 2015 (ESSA), the latest reauthorization of the Elementary and Secondary Education Act, states, that after two years an ELL student's standardized test scores must become part of a school and school district's accountability formula.

Regarding ELL student education, ESSA under Title I declared, "a State may choose to...exclude...an English learner from one administration of the reading or language arts assessment required...and...such an English learner's results on any of the assessments required" (pp. 33-34). According to second language acquisition research it takes longer than two years and up to seven years for an ELL student to acquire the academic language necessary to become proficient on a standardized test (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016). In implementing ESSA, the United States government provided schools with a legislation that is inherently disconnected to what second language acquisition

research has reported. Every public school has the responsibility to provide an adequate free and public education to ELL and non-ELL learners. The creation of legislation that prematurely assesses ELL students, negatively affects the progress of the student, school, and school district.

As experienced by various parts of the United States, ELL student populations are increasing in the state of Florida, which makes the implementation of this legislation especially concerning to the state. In the fall of 2015, “the percentage of public school students in the United States who were ELLs” was “9.5 percent”, or an estimated “4.8 million students” (National Center for Education Statistics, 2018). At the state level, the state of California led the nation with 21 percent, or an estimated 1.3 million of its public-school students designated ELL (National Center for Education Statistics, 2017). It was followed by the state of Texas and Nevada where ELL students accounted for 16.8 percent of the public-school student population on each state (i.e., 892,082 in Texas and 78,416 in Nevada) (National Center for Education Statistics, 2017). According to the National Center for Education Statistics (NCES), as of the fall of 2015, the state of Florida had 268,189 ELL students in its public school system (i.e., 9.6 percent of its total public school population) or an estimated 5.6 percent of all the nation’s ELL students in its schools’ receiving Title III services (National Center for Education Statistics, 2017). Moreover, the large suburban school district studied was one of the ten school districts, in the state of Florida, that collectively served approximately 77% of students receiving Title III services (National Clearinghouse for English Language Acquisition, n.d.).

To address the above concerns, the study examined the appropriateness of a policy that is not consistent with what has been reported by second language acquisition research. The study explored the following: (a) past and current federal policy regarding ELL education, (b) the research related to second language acquisition, (c) ELL education in the state of Florida, and (d)

the diagnostic scores of ELL and non-ELL students to reach an understanding of how the students progressed and the effect the two-year ELL accountability mark had.

Statement of the Problem

The two-year deadline established by ESSA for when ELL students' standardized test scores become part of the accountability formula is in direct contradiction with existing second language acquisition research. The existing research asserts that it takes longer than two years and up to seven years for an ELL student to acquire academic language proficiency (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016). Neal (2015) defines academic language proficiency as "the ability to understand and command the specialized language" of each subject area (e.g., mathematics and reading). If a student is unable to reach academic language proficiency, the student will struggle because it is essential to reach proficiency in a subject area. To date, however, the research fails to directly address how the two-year ELL accountability mark affects the progress of ELL students, the schools they attend, and their school district.

Purpose of the Study

The purpose of the study was to investigate, within the context of a large suburban school district in which the issue is highly relevant, how the academic performance of middle school ELL students in sixth, seventh, and eighth grade improved during the first two years of participating in an ELL program (i.e., over the time-period during which they are expected to attain English language proficiency that is comparable with native speakers, thus justifying their inclusion in the population of students tested for accountability purposes). In addition, the study compared the academic growth of middle school ELL and non-ELL students in sixth, seventh, and eighth grade during the same two-year period. The students described as ELL in the study

are students that are classified LY by the large suburban school district (Florida Department of Education, 2013-2014, p. 3). Lastly, the study explored how the hypothetical academic progress of ELL students' (i.e., if or when ELL students are likely to intercept the performance level of non-ELL students beyond the two-year mark) supported or called into question the two-year mark established by ESSA.

Significance of the Study

The study is critical because it utilized extant data from a large suburban school district with a high and rapidly growing ELL population. The large suburban school district is one that would be substantially affected by the two-year requirement. Indeed, according to the National Clearinghouse for English Language Acquisition (NCELA), the large suburban school district was one of the ten school districts, in the state of Florida, that collectively served approximately 77% of the state's students receiving Title III services. Title III is used to supplement "services that must be provided to [ELLs] under Title VI of the Civil Rights Act of 1964...the Equal Opportunities Act of 1974 (EEOA), and other requirements, including those under State or local laws" (United States Department of Education, 2016, p. 4). Furthermore, the study provides insight as to how the two-year mark established by ESSA is helping or hindering ELL students, the schools they attend, and their school districts. Lastly, as with research on reading development, the K-12 research on second language acquisition has mostly focused on younger students ranging from pre-Kindergarten to third grade (Bumgarner & Lin, 2014). Using middle school students in sixth, seventh, and eighth grade becomes significant since it would fill a gap in the current literature.

Operational Definition of Terms

The following operational definitions will be used in the study. In the context of the study, the Florida definition of English language learner will be utilized.

Florida Definition of English Language Learner. “A student who:

- a. Was not born in the U.S. and whose native language is other than English; or
- b. Was born in the U.S. but who comes from a home in which a language other than English is most relied upon for communication; or
- c. Is an American Indian or Alaskan Native and comes from a home in which a language other than English has had a significant impact on his or her level of English Language Proficiency; and
Who as a result of the above, has sufficient difficulty speaking, reading, writing, or understanding the English language to deny him or her the opportunity to learn successfully in classrooms in which the language of instruction is English”. (Florida Department of Education, 2013-2014, p. 3)

Federal Definition of English Learner. “The term “English learner,” when used with respect to an

individual, means an individual —

(A) who is aged 3 through 21;

(B) who is enrolled or preparing to enroll in an elementary school or secondary school;

(C)(i) who was not born in the United States or whose native language is a language other than English; (ii)(I) who is a Native American or Alaska Native, or a native resident of the outlying areas; and (II) who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency; or (iii) who is migratory, whose native language is a language other than English, and who comes from an environment where a language other than English is dominant; and

(D) whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual — (i) the ability to meet the challenging State academic standards; (ii) the ability to successfully achieve in classrooms where the language of instruction is English; or (iii) the opportunity to participate fully in society”. (United States Department of Education, 2016, p. 43)

LY Classification. A student that is “an English Language Learner and is enrolled in classes specifically designed for English Language Learners” (Florida Department of Education, 2013-2014, p. 3).

Academic Language Proficiency. For the study, the term academic language proficiency is defined as “the ability to understand and command the specialized language practices of the

academic disciplines in order to learn, communicate, and participate in these disciplines” (Neal, 2015, p. 12).

English Language Learners Instructional Models. The large suburban school district utilizes the following ELL instructional models: “Sheltered English Language Arts, Sheltered Core/Basic Subject Areas, Mainstream-Inclusion English Language Arts, Mainstream-Inclusion Core/Basic Subject Areas, Maintenance and Developmental Bilingual Education” and “Dual Language (two-way) and (one-way) Developmental Bilingual Education” (District English Language Learners (ELL) Plan, 2016-2019, p. 14).

i-Ready Diagnostic. An assessment “designed to help teachers pinpoint their students’ strengths and areas of need down to the sub-skill level for grades K-12” (Curriculum Associates, 2015, p. 15).

WIDA Access for ELLs 2.0 Series 400 Assessment (paper based). The objective of the Access for ELLs 2.0 “is to assess the developing English language proficiency of English language learners (ELLs) in Grades K-12 in the United States” (Center for Applied Linguistics, 2018, p. 1).

Large Suburban School District. The National Center for Education Statistics designates the school district where the study will take place as a large suburban school district. It defines a large suburban school district as a “territory outside a Principal City and inside an Urbanized Area with population of 250,000 or more” (National Center for Education Statistics, n.d.).

According to the United States Census Bureau, the county population totaled 336,015 (United States Census Bureau, n.d.) and it is a geographically diverse school district with urban, suburban, and rural elements within it.

Socioeconomic Status (SES). For the study, socioeconomic status is defined as whether students receive free or reduced lunch. These are students from families “earning at or below current income eligibility guidelines” (Florida Department of Agriculture, 2019). In addition to students that are currently receiving Supplemental Nutrition Assistance (SNAP) because they automatically qualify for free meals.

Exceptional Student Education (ESE). The study will define exceptional student education students as any student evaluated and found with any of the following exceptionalities, a “mental retardation, hearing impairment (including deafness), speech or language impairment, visual impairment (including blindness), serious emotional disturbance...orthopedic impairment, autism, traumatic brain injury, other health impairment, or specific learning [disability]” and it is on track to receive a traditional or International Baccalaureate diploma (IDEA, 2004, p. 2652).

Conceptual Framework/Literature Review

The study utilized critical policy analysis as a primary orientation to investigate the appropriateness of the two-year mark established by ESSA. Critical policy analysis is both a theoretical model and a methodology and represents an approach in which policy is situated in, and thus an extension of, the power dynamics that exist and operate in those contexts (Ball, 1994; Edmonson, 2004; Prunty, 1985; Taylor, 1997). According to Codd (1988), critical policy analysis “is a form of enquiry which provides either the informational base upon which policy is constructed, or the critical examination of existing policies” (p. 235). Codd (1988) added that as part of this critical examination of existing policies, “the effects of such policies on various groups” are also explored (p. 236).

It is this last point that the study investigated. The policy in question, the two-year mark established by ESSA for ELL accountability, was designed and aimed to address the education

of ELLs in United States schools. Currently, second language acquisition research states that two years is not an appropriate time frame for this subgroup of students to reach academic language proficiency (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016). Diem et al. (2014) states that “critical theories facilitate the exploration of policy roots and processes [and] how educational programs and policies, regardless of intent, reproduce stratified social relations” (Diem et al., 2014, pp. 1072-1073). Using critical policy analysis, as a lens, the study investigated how regardless of intent or despite of it, the two-year mark is affecting ELL students in the large suburban school district.

The conceptual framework for the study included three distinct elements: the historical context of federal policy regarding ELL education, the empirical base regarding second language acquisition, and the policy context of ELL education in Florida. Collectively, these three elements framed the investigation and provided the context within which results were interpreted.

The first element focused primarily on the different reauthorizations to the Elementary and Secondary Education Act (ESEA) along with landmark court cases that shaped and influenced the trajectory of policy related to the education of ELLs. The Civil Rights Act of 1964 created the legal basis to why education, in this case, had to be individualized and responsive to a student’s limited English proficiency. The Civil Rights Act of 1964 stated that:

No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. (Civil Rights Act, 1964, Title VI)

Title VI of The Civil Rights Act of 1964 paved the way for the “Bilingual Education Act” or Title VII of the Elementary and Secondary Education Amendments of 1967. The “Bilingual Education Act” of 1967 was the first time that English language education was addressed in an

Elementary and Secondary Education reauthorization. The United States Congress policy was clear, the law was to provide “financial assistance to local educational agencies to develop and carry out new and imaginative elementary and secondary school programs designed to meet these special educational needs” (Elementary and Secondary Education Amendments, 1967, p. 816).

Even though, ELL students were gaining more rights and the federal government acknowledged the complexity of educating this subgroup of students, discrimination against this subgroup of students was still taking place. In 1970, the former Department of Health, Education, and Welfare (i.e., currently the Department of Education and the Department of Health and Human Services), in a memorandum, listed concerns regarding “common practices which have the effect of denying equality of educational opportunity” (Department of Health, Education, and Welfare, 1970). Some of the concerns were echoed in the landmark Supreme Court opinion of *Lau v. Nichols* (1974). Justice William O. Douglas wrote the opinion, “Under these state-imposed standards there is no equality of treatment by providing students with the same facilities, textbooks, teachers, and curriculum” because their lack of English language proficiency negates these students from learning (*Lau v. Nichols*, 1974). The Civil Rights Act of 1964, the “Bilingual Education Act” of 1967, and the Supreme Court opinion of *Lau v. Nichols* (1974) advanced ELL education rights; an advancement palpable in the No Child Left Behind Act (NCLB) of 2001, almost 30 years later.

NCLB sought to “hold State educational agencies [SEA], local educational agencies [LEA], and schools accountable” for the yearly progress of ELL students in both English language proficiency and core content areas (NCLB, 2001, p. 1690). In addition, a SEA and LEA were granted, “flexibility to implement language instruction educational programs, based on

scientifically based research” regarding ELL education (NCLB, 2001, p. 1691). The law may have promoted the utilization of scientifically based research to teach ELL students, but still demanded ELL accountability after one year, which is in direct contradiction with what has been reported by second language acquisition research. The existing research asserts that it takes longer than two years and up to seven years for an ELL student to acquire academic language proficiency (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016).

Furthermore, the latest reauthorization of the education law, the Every Student Succeeds Act (ESSA) of 2015, also pays attention to providing support to ELL students. It demands programs that are in alignment with State standards and it adopted “English language proficiency standards” that focus on the “4 recognized domains of speaking, listening, reading, and writing” (Every Student Succeeds Act, 2015, p. 1825). ESSA increased the ELL accountability mark from one year to two, but it is still not the appropriate time to demonstrate English language proficiency, according to second language acquisition research. Since the passage of the Elementary and Secondary Education Amendments of 1967, ELL funding has improved from \$15 million for fiscal year 1968 to \$769 million for fiscal year 2018. Improvements have been made in the law, but ESSA still carries out a policy that contradicts the extant literature on second language acquisition and might be hindering the progress of this subgroup of students.

The second element of the framework engaged second language acquisition research, and it incorporated research that is peer reviewed, substantive to the field and relevant to the study. The research presented in this section ranges from Kindergarten to twelfth grade. Collier (1995) attempts to dispel any misunderstandings regarding second language acquisition and attributes many of those misunderstandings at “U.S policymakers and educators” assumptions that language learning is all about having students learning how to speak English (p. 3). Collier

(1995) goes on to say, “postponing or interrupting academic development [content knowledge] is likely to promote academic failure” (p. 5). Moreover, Collier (1995) provides different estimates for how long does it take an ELL student to reach academic proficiency in the second language. The estimates differ depending on the type of English language program the students are enrolled. In English language programs that are only provided in English, Collier (1995) states that if the student arrives to a U.S. school without prior formal schooling, in his or her primary language, then academic proficiency is achieved anywhere from “7-10 years” (Collier, 1995, p. 7). On the other hand, if the student has “2-3 years of first language schooling”, in his or her primary language, then academic proficiency is achieved within five to seven years (Collier, 1995, p. 7). In English language programs that are bilingual (e.g., English and the student’s primary language), Collier (1995) states that ELL students “typically reach and surpass native speakers performance across all subject areas after 4-7 years” (p. 8).

In a study by MacSwan and Pray (2010), students indicating in a home survey that a language other than English was spoken in the home were assessed with a Bilingual Syntax Measure (BSM) “to assess language proficiency” (p. 663). The BSM ranged from a level 1 or no English proficiency to a level 5 or 6 for a student considered proficient in the English language. MacSwan and Pray (2010) reported that the “average number of years required for children to achieve a score of 5 or 6 on the BSM was 3.31 years, with a standard deviation of 1.31 years” (p. 667). Hakuta (2011) reinforces the fact that it takes longer than two years to acquire academic language proficiency, an assumption made by ESSA in its two-year ELL accountability mark. Hakuta (2011) writes about Proposition 227, a law in California dictating that ELL students were to be taught, “through sheltered English immersion during a temporary transition period not normally intended to exceed one year” (p. 167). The ELL accountability mark established by

Proposition 227 in California mirrors the expectation for language proficiency in No Child Left Behind (2001). In testifying “before a subcommittee on ESEA reauthorization”, Hakuta (2011) stated that it takes “5 to 7 years” for an ELL student to reach academic language proficiency. Moreover, regarding Proposition 227, Hakuta (2011) provided expert testimony where he said “no theory of second language acquisition would find one year to be a credible time window” to achieve English language proficiency (p. 167).

Furthermore, Kieffer and Parker (2016), in a study for the Regional Education Laboratory of Northeast and Islands, challenged the assumption that it takes two years for ELL students to reach academic language proficiency. The study was conducted using “longitudinal administrative data” aimed to answer the question of how long does it take an “English Language learner student...to become reclassified” (Kieffer & Parker, 2016, p. i). The study defined reclassification, as the time it takes an ELL student to score proficient on the New York State English as a Second Language Achievement Test (Kieffer & Parker, 2016, p. 2). Kieffer and Parker (2016) found that “of students who entered kindergarten as English learner students, 52 percent were reclassified as former English learner students by the end of their fourth year in New York City public schools, which equates to the end of grade 3 for students who were not retained in grade” (p. 5). In addition, the study found that “after six years’ 75 percent of students who entered kindergarten as English learner students were reclassified” (p. 5). The study also found that “the time for English learner students to become reclassified differed by the grade at which they entered New York City public schools” with estimates ranging from “three years to more than five years” (Kieffer & Parker, 2016, p. 6).

The third element of the framework engaged relevant legislation that has influenced and/or continues to influence ELL student education in the state of Florida. The section included

the Florida Consent Decree of 1990. The Consent Decree of 1990 was an agreement between private organizations and the state of Florida to rectify some of the practices regarding ELL students that were found to violate student rights. The Consent Decree (1990) covers: the Identification and Assessment, the Equal Access to Appropriate Programming, Equal Access to Appropriate Categorical and other Programs for LEP [Limited English Proficient] Students, Personnel, Monitoring Issues and Outcome Measures for ELL students. This section also included Title XLVIII 1003.56 of the Florida constitution because it governs the procedures and requirements school districts must follow regarding ELL education in the state of Florida.

Moreover, the section included legal disagreements between Florida's Department of Education (FLDOE) and the United States Department of Education (USDOE). The study included the 2014 debate between the FLDOE (i.e., Governor Rick Scott and Commissioner of Education Pamela Stewart) and USDOE regarding the extension of ELL accountability from one year to two. In addition, the section highlighted contemporary news detailing the rise of ELL students in the state. It also included the increased number of students arriving from Puerto Rico and the United States Virgin Islands in the aftermath of Hurricane Maria (September 2017). Since Hurricane Maria impacted Puerto Rico, "about 300,000 island residents have arrived in the state since early October" (Respaut & Baez, 2018). In total, "more than 11,200 students from Puerto Rico and the U.S. Virgin Island have enrolled in Florida public schools since the storms" (Respaut & Baez, 2018). Lastly, the section will include the increased number of students arriving from the country of Venezuela because of the political unrest and turmoil the country has experienced. Susie Castillo, a Miami-Dade school district School Board member says that "we have people coming in every single day... We don't know what's going to happen in that country. We are prepared" (Gurney, 2017).

Research Questions:

The following research questions guide the study:

1. In what ways and to what extent does the performance of ELL students improve during the first two years of participating in an ELL program?

Research Question 1 was important to the study because the answer clarified the rate that ELL students, in the large suburban school district under study, were improving academically during the two-year term (i.e., 2016-17 and 2017-18). The Every Student Succeeds Act of 2015 (ESSA) dictates that in two years after an ELL student enrolls in a U.S. school, his or her standardized test scores are counted toward school and district level measures of accountability. Thus, a descriptive understanding of the performance of this subgroup during the two-year term was essential.

2. In what ways and to what extent does the academic growth of ELL students differ from non-ELL students during the first two years of participating in an ELL program?

Research Question 2 was important to the study because the comparison of the two groups (i.e., ELL and non-ELL students) yielded evidence as to how the rate of academic growth was different between the groups during the two-year period. To account for the potential influence of other variables, the model included two moderator variables (i.e., socioeconomic status and eligibility for exceptional education services) that have been linked to student performance in the extant literature (Murphy, 2010).

3. To what extent does the academic growth trajectory of ELL students support or call into question policies related to standardized testing?

Research Question 3 was important to the study because the results obtained in Research Question 2 indicated that ELL students are making greater gains than non-ELL students. As a

result, the study explored the growth trajectory of ELL students into a hypothetical additional year (i.e., year three), but results suggest that an additional year would not make a difference. ESSA established the two-year ELL accountability mark, but second language acquisition research states that it takes longer than two years and up to seven years to acquire academic language proficiency (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016). Currently, there is an inherent disconnect between ESSA and what is reported by second language acquisition research.

Methodology

The study is a quantitative study that analyzed data from both ELL and non-ELL students to disclose and describe the academic trajectory of both groups. The data analyzed is from middle school *i-Ready* diagnostic scores in mathematics and reading. The study utilized *i-Ready* diagnostic scores because they are given to students three times a year, which allows for a more accurate interpretation of a student's performance. Furthermore, the study analyzed data from ELL students designated as LY and non-ELL students from a period of two years because of the two-year ELL accountability mark established by ESSA. The study included tier placement results (i.e., WIDA Tier A, WIDA Tier B, or WIDA Tier C) from the WIDA Access for ELLs 2.0. Lastly, the study utilized various quantitative strategies to measure and interpret the change in the academic performance of both groups as the basis for questioning the appropriateness of the extant policy.

Research Design

The study employed a causal-comparative design using visual analysis, descriptive statistics, and a factorial two-way ANOVA. A causal-comparative design is one where “investigators attempt to determine the cause or consequences of differences that already exist

between or among groups of individuals” (Fraenkel, Wallen, & Hyun, 2012, p. 366). Middle school assessment data, for both mathematics and reading, were analyzed using visual analysis.

The use of visual analysis for the study was appropriate because it is

The array of one set of information relative to one or more other sets of information, so that a viewer can draw a reasonable conclusion or make a reasonable hypothesis about any relationships or lack of them among these sets. (Kratochwill & Levin, 2015, p. 15)

In addition, the study utilized descriptive statistics. The data for the study is middle school *i-Ready* diagnostic data for all middle school students in sixth, seventh, and eighth grade that were present for all twelve assessments in the two-year term (i.e., six for reading and six for mathematics). The large suburban school district utilizes *i-Ready* diagnostics, as a predictor of future performance in the Florida Standards Assessments (FSA). According to the Educational Research Institute of America (ERIA) (2017), the *i-Ready* diagnostic, an assessment “designed to help teachers pinpoint their students’ strengths and areas of need down to the sub-skill level for grades K-12” (Curriculum Associates, 2015, p. 15), was found to have a strong correlation with the 2016 Florida Standards Assessments (p. 10). It goes on to report overall correlations of .84 for [reading] and .83 for mathematics for all students across grades 3-8 (Educational Research Institute of America, 2017). For the study, descriptive statistics were appropriate because they are used to interpret “large amounts of data” by organizing and summarizing the data (Holcomb, 2017, p. v).

To account for variations in students’ English language skills, the descriptive and visual analyses were performed using subsets of the data as disaggregated by the students’ WIDA Access for ELLs 2.0 assessment results. WIDA Access for ELLs 2.0 describes the development of an ELL students “in four language domains: Listening, Reading, Writing, and Speaking” (Center for Applied Linguistics, 2018, p. 3). The assessment is separated into three tiers (i.e.,

WIDA Tier A, WIDA Tier B, or WIDA Tier C) that correspond to the English language development standards described by WIDA (i.e., Entering, Emerging, Developing, Expanding, Bridging, and Reaching) (Center for Applied Linguistics, 2018, p. 6). The tiers are progressive with WIDA Tier A representing ELL students with the lowest English language proficiency and WIDA Tier C representing ELL students with the highest English language proficiency. In addition, the English language development standards are progressive as well with “entering” at the lowest and “reaching” at the highest proficiency level (Center for Applied Linguistics, 2018, p. 3).

The study utilized a factorial two-way ANOVA. According to Steinberg (2011), an ANOVA is appropriate when comparing the variation in a dependent variable across more than one independent variable (p. 335). The study has three independent variables: ELL, socioeconomic (SES) status, and exceptional student education (ESE) status. The use of a factorial two-way ANOVA was appropriate to the study because of the ability of the ANOVA to combine several different hypotheses in a single analysis to measure both main effects and interaction effects (Steinberg, 2011, p. 337). A main effect captures the direct relationship between an independent factor variable and the dependent variable, while an interaction effect is when “one independent variable has an effect on the dependent variable, but only as a function of the level or condition of the second independent variable” (Steinberg, 2011, p. 337). Using a factorial two-way ANOVA made the study more robust because it (1) clarified whether the extent of growth is different for ELL and non-ELL students, while accounting for other relevant characteristics that have been shown to influence achievement outcomes; and (2) measure and describe the interaction between ELL status and those other characteristics in terms of their relationship to academic outcomes.

Population

The participants for the study were all middle school students in sixth, seventh, and eighth grade, enrolled in the large suburban school district for whom there is complete and viable data from administration of the *i-Ready* diagnostics in both mathematics and reading, during the 2016-17 and 2017-18 academic year. Furthermore, the students described as ELL in the study are students classified LY by the large suburban school district. These are students that are “enrolled in classes specifically designed for English Language Learners” (Florida Department of Education, 2013-2014, p. 4). In total, the students were assessed six times in each subject including a baseline, mid-year, and end-of-year assessment for each year.

The large suburban school district selected for the study had a total student enrollment of 14, 241 in grades sixth through eight during the 2016-17 academic year (Florida Department of Education, n.d.). A total of 19.6% of students, for the entire large suburban school district, were classified as ELL students, 10.6% were classified as disabled (ESE), and 57% were classified as economically disadvantaged (SES) (Florida Department of Education, n.d.). During the 2017-18 academic year, the large suburban school district had a total student enrollment of 15,159 in grades sixth through eight (Florida Department of Education, n.d.). A total of 19.7%, for the entire large suburban school district, were classified as ELL students, 10.7% were classified as disabled (ESE), and 51.2% were classified as economically disadvantaged (SES) (Florida Department of Education, n.d.).

Instrumentation and Data Collection

The data utilized for the study was extant data on mathematics and reading *i-Ready* diagnostics. It was collected from the large suburban school district’s *i-Ready* data repository. Moreover, subsets of ELL student data indicating WIDA Access for ELLs 2.0 tier placement

(i.e., WIDA Tier A, WIDA Tier B, or WIDA Tier C) were used. The data were collected from FOCUS, the large suburban school district's student data repository. Additionally, the enrollment demographic data including ELL, socioeconomic status (SES), and exceptional student education (ESE) status were collected from FOCUS.

Variables

For Research Question 1, the dependent variables were the *i-Ready* diagnostic scores in mathematics and reading. The independent variables were the WIDA Access for ELLs 2.0 assessment tier placement (i.e., WIDA Tier A, WIDA Tier B, or WIDA Tier C) and the *i-Ready* test administration (i.e., year one baseline, year one midpoint, year one final, year two baseline, year two midpoint, and year two final).

For Research Question 2, the dependent variables were the computed gain scores in the *i-Ready* diagnostic assessment for mathematics and reading that were computed as year two final score minus year one baseline score. The independent variables are ELL status (i.e., ELL or non-ELL), SES status (i.e., eligible for free/reduced meals or not eligible), and ESE status (i.e., qualifying for exceptional education services or not qualifying).

For Research Question 3, the dependent variables were the *i-Ready* diagnostic scores in mathematics and reading. The independent variables were the ELL status and the *i-Ready* test administration, and the mean scale score projection for the hypothetical year (i.e., year three), since it was warranted by the results obtained for Research Question 2. Table 1 presents the research questions for the study, along with the dependent and independent variable, and the data source.

Table 1
Research Questions, Data, and Method of Analysis

Research Questions	Data	Methods of Analysis
1. In what ways and to what extent does the performance of ELL students improve during the first two years of participating in an ELL program?	Dependent Variable: <i>i-Ready</i> reading and math diagnostic scores Independent Variable: WIDA assessment, test administration	Visual analysis and descriptive statistics
2. In what ways and to what extent does the academic growth of ELL students differ from non-ELL students during the first two years of participating in an ELL program?	Dependent Variable: Gain scores for reading and math Independent Variables: ELL, SES, and ESE status.	Factorial two-way ANOVA
3. To what extent does the academic growth trajectory of ELL students support or call into question policies related to standardized testing?	Dependent Variable: <i>i-Ready</i> reading and math diagnostic scores Independent Variable: WIDA assessment, test administration	Visual analysis and descriptive statistics for two-year period. An ancillary analysis with projected academic growth for year three.

Data Analysis

Research Question 1 was answered using visual analysis and descriptive statistics. Results from the twelve *i-Ready* diagnostic administrations (i.e. six for mathematics and six for reading) were used to create tables with frequencies, means, and standard deviations for each of the three sub-groups (i.e., WIDA Tier A, WIDA Tier B, and WIDA Tier C) based on WIDA Access for ELLs 2.0 assessment results. Then, the results were interpreted to describe and

characterize any observed trends. In addition to using a line graph to visually represent central tendencies and variance (Field, 2013). Visual analysis was used to answer Research Question 1 because “the viewer can see - not read, deduce, or derive, but see, and see quickly – the relationship or its absence” (Kratochwill & Levin, 2015, p. 15). Additionally, the study used descriptive statistics because they “are tools that help us organize and summarize data” (Holcomb, 2017, p. v). The descriptive statistics were organized in cross-tabulation tables to disaggregate the data by the independent variable and thus augment the visual analysis.

Research Question 2 was answered using a factorial two-way ANOVA. The use of a factorial two-way ANOVA allows for determining whether there is a statistically significant relationship between the independent variable (i.e., ELL status) and the dependent variable (i.e., gain score mean for ELL and non-ELL students), which is defined as a main effect (Steinberg, 2011, p. 337). Table 2 displays the relationships explored through Research Question 1 related to the main effects (average scores). Moreover, using a factorial two-way ANOVA allows for investigating interaction effects. Specifically, the design allowed for the investigation of whether the relationship between ELL status and gain scores were moderated by SES or ESE status and produced the average gain score for the following categories of students (low-SES and ELL, low-SES and non-ELL, high-SES and ELL, high-SES and non-ELL, ESE and ELL, ESE and non-ELL, non-ESE and ELL, non-ESE and non-ELL). Table 3 and Table 4 display the interaction effects that were explored through Research Question 2 related to the interaction effects (i.e., average scores).

Table 2
Main Effects

ELL	Gain score (mean) for ELL students
Non-ELL	Gain score (mean) for non-ELL students

Table 3
ELL Status X SES Interaction

	Low SES	High SES
ELL	Gain score (mean) for low SES ELL students	Gain score (mean) for high SES ELL students
Non-ELL	Gain score (mean) for low SES non-ELL students	Gain score (mean) for high SES non-ELL students

Note: inclusion of ESE status controls for its influence

Table 4
ELL Status X ESE Interaction

	ESE	Non-ESE
ELL	Gain score (mean) for ESE ELL students	Gain score (mean) for non-ESE ELL students
Non-ELL	Gain score (mean) for ESE non-ELL students	Gain score (mean) for non-ESE non-ELL students

Note: inclusion of SES controls for its influence

Research Question 3 was answered using visual analysis and descriptive statistics. Results from the twelve *i-Ready* diagnostic administrations (i.e., six for mathematics and six for reading) were used to create tables with frequencies, means, and standard deviations for ELL and non-ELL students. Then, the results were interpreted to describe and characterize any observed trends. In addition to using a line graph to visually represent central tendencies and variance (Field, 2013). The ancillary analysis was conducted by using the mean score for all ELL and non-ELL students, in each test administration, to calculate the average gain per year across each group and that average gain value was used to project the hypothetical additional year.

Delimitations

The study was conducted using extant data of one large suburban school district in the state of Florida. The participants were middle school students in sixth, seventh, and eighth grade.

Limitations

The delimitation to a single district means that results are not immediately generalizable to other districts. Cautious generalizations may be made if warranted by the results, however. Of note, the large suburban school district studied was one of the ten school districts in the state of Florida that collectively served approximately 77% of students receiving Title III services (National Clearinghouse for English Language Acquisition, n.d.); the results should especially be informative to this large suburban school district. In addition, the delimitation to middle school students in sixth, seventh, and eighth grade means that results are not immediately generalizable to other grade levels (e.g., K-5 or 9-12), but cautious generalizations may be made if warranted by the results. Moreover, there are extraneous variables that cannot be controlled for (e.g., teacher quality, ELL instructional model); so observed differences might be the result of something other than the variables of interest. Lastly, the extant data is from a past event, so a causal-comparative study cannot determine actual causes of a result, only possible causes (Fraenkel, Wallen, & Hyun, 2012, p. 367).

Summary

There is a preponderance of second language acquisition research that states that two years is not enough time for an ELL student to reach academic language proficiency. Yet, ESSA established a two-year mark for ELL accountability. The results of the quantitative study will shed light into the appropriateness of the policy set forth by the U.S. federal government. In addition, the results have the potential to assist lawmakers in future decision making related to the subgroup (ELL) of students studied.

CHAPTER TWO: LITERATURE REVIEW

Introduction

English language learner (ELL) students represent a significant portion of the public-school population in the United States. In the academic year 2011-12, the United States Department of Education (USDOE) estimated the ELL population to be at 4.4 million students, or 9.1% of the school population (Carroll & Bailey, 2016, p. 24). Furthermore, the California Department of Education stated that there were over a million ELL students in its schools in the 2016-17 school year (California Department of Education, 2018). The state of Texas reported, in the 2006-07 academic year, that 16% of the total pre-Kindergarten to 12th grade population was designated ELL (Shin, 2010, p. 13). In addition, the Department of Education in New York City public schools reported that 14% of its school population is classified as ELL and almost half of its students speak a second language (Kieffer & Parker, 2016, p. 1). As of 2015, there were 268,189 ELL students in Florida schools constituting 9.6 percent of the school population (National Center for Education Statistics, 2017).

Given the substantial population of ELL students, understanding the history of federal policy related to ELL students, the research regarding second language acquisition, and how the state of Florida addresses the education of these segment of the student population is critical. At the center of the discussion is the two-year accountability mark established by ESSA. The federal policy was designed to create accountability for ELL students, but it is not responsive to the findings of second language acquisition research. The study utilizes critical policy analysis, as a lens, to investigate and to question an existing policy that is affecting millions of students across the United States (Diem et al., 2014, p. 1072). The following chapter is organized into

three sections: the Historical Context of Federal Policy Regarding ELL Education, Second Language Acquisition Research, and ELL Students in the State of Florida.

The Historical Context of Federal Policy Regarding ELL Education

On January 2, 1968, the Elementary and Secondary Education Amendments (ESEA) of 1967 became law and aimed to create educational programs and/or reform existing ones for elementary and secondary schools (Elementary and Secondary Education Amendments, 1967, p. 783). In these set of amendments (i.e., the first amendments to the Elementary and Secondary Education Act of 1965), the United States Congress added, for the first time, a Bilingual Education Act (BEA). Title VII, as it was designated, included programs designed to help ELLs in public schools. The law stated,

In recognition of the special educational needs of the large numbers of children of limited English-speaking ability in the United States...hereby declares it to be the policy of the United States to provide financial assistance to local educational agencies to develop and carry out new and imaginative elementary and secondary school programs designed to meet these special educational needs. For the purposes of this title, 'children of limited English speaking ability' means children who come from environments where the dominant language is other than English. (Elementary and Secondary Education Amendments, 1967, p. 816)

The BEA of 1967 placed the highest priority on states with high ELL populations because they required more assistance to attend to the educational needs of this segment of the school age population. The act provided funding for training programs created to prepare different educational personnel to be part of bilingual education programs such as teachers and counselors (Elementary and Secondary Education Amendments, 1967, p. 817). In addition, the BEA appropriated \$15,000,000 for fiscal year 1967, \$30,000,000 for fiscal year 1969, and \$40,000,000 for fiscal year 1970 (Elementary and Secondary Education Amendments, 1967, p. 816). It was the federal response to the need to address “one of the most acute educational

problems in the United States”, the education of ELL students (Elementary and Secondary Education Amendments, 1967, p. 816).

After the Civil Rights Act of 1964, and the 1967 ESEA, the practice of denying ELL students equal access to education persisted. In a 1970 memorandum, directed to “School Districts with More Than Five Percent National Origin-Minority Group Children”, from the Department of Health, Education, and Welfare (DHEW) (i.e., currently the Department of Education and the Department of Health and Human Services), DHEW sought to clarify its policy on the need of school districts to provide equal access to education for ELL students (Department of Health, Education, and Welfare, 1970). The 1970 memorandum highlighted the major areas of concern found to be in violation of Title VI of the Civil Rights Act of 1964 and of DHEW departmental regulations. Title VI of the Civils Rights Act of 1964 and DHEW departmental regulations prohibited the discrimination of any person, from a protected class, on a program receiving federal assistance (Department of Health, Education, and Welfare, 1970). The memorandum addressed the need for a school district to take decisive steps to open instructional programs to ELL students because their inability to understand English excludes them from participating (Department of Health, Education, and Welfare, 1970). In addition, school districts must not assign ELL students to special education classes utilizing evaluative measures design to test their language skills (Department of Health, Education, and Welfare, 1970). Furthermore, if ELL students are placed in a program created to have them gain language proficiency, the program must aim to do so at an appropriate time (Department of Health, Education, and Welfare, 1970). The areas of concern, detailed in the memorandum, were part of practices by school districts that effectively denied ELL students access to equal educational opportunities.

As an example, the state of Texas, a state with a high population of ELL students, was part of several lawsuits regarding the treatment of ELL students in its school districts.

ELL Students and the Federal Courts

In *United States v. Texas* (1971), the United States District Court for the Eastern District of Texas found that the state “was de jure discriminatory” or found to be promoting policies perceived as deliberate actions by the state educational agency to implement racial segregation in its school districts (Boykin & Palmer, 2016, p. 115). The case centered on the creation and desegregation of the San Felipe Del Rio Consolidated Independent School District (*United States v. Texas*, 1971). In its findings, the court cited the treatment of Mexican-American students in the newly consolidated school district of Del Rio. The court explains how, for years, the Mexican-American students of the Del Rio area have been subjected to unequal treatment and were part of the *de jure* school system based on the deliberate separation of students from different ethnic backgrounds (*United States v. Texas*, 1971). In addition, since the court found that the former school districts of San Felipe and Del Rio could have not existed without being largely funded by the state of Texas, the court believed the segregated system was a direct outcome of state action (*United States v. Texas*, 1971). As a result of the court’s decision, the San Felipe and Del Rio school district became the San Felipe Del Rio Consolidated Independent School District.

Afterwards, the newly created school district was ordered to submit a comprehensive educational plan to address the court’s findings. The court stated that after providing the San Felipe Del Rio Consolidated Independent School District with ample time to develop a plan, the court concluded that the school district had made no sincere attempt to obtain the necessary federal funding to adequately implement the Comprehensive Educational Plan ordered by the

court (*United States v. Texas*, 1971). On November 26, 1971, the court decided to adopt a plan that contained the following elements: Professional Staff Treatment and Assignment, Curriculum Design and Content Instructional Methodology, Student Assignment and Classroom Organization, Staff Development, Parent and Community Involvement, Special Education, Non-Instructional Support, Funding and Timing, and Evaluation of Comprehensive Plan (*United States v. Texas*, 1971). In addition to Texas, California, another state with a high ELL population, was the subject of lawsuits regarding the treatment of ELL students in its school districts.

In the Supreme Court case of *Lau v. Nichols* (1974), a group of ELL students from a Chinese ethnic background, brought a class action suit against the San Francisco Unified School District (*Lau v. Nichols*, 1974). The group of students alleged that they were denied access to equal educational opportunities because the school district did not create a program to address the students' language proficiency (*Lau v. Nichols*, 1974). Before the case was granted certiorari by the United States Supreme Court, the United States District Court for the Northern District of California "denied relief", and the "United States Court of Appeals for the Ninth Circuit affirmed"; neither court found a "violation of the equal protection clause of the Fourteenth Amendment nor of 601 of the Civil Rights Act of 1964" (*Lau v. Nichols*, 1974). The Supreme Court reversed and remanded the case. In the opinion, Justice Douglas stated that given the state-imposed standards of the state of California "there is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education" (*Lau v. Nichols*, 1974). In the opinion, Justice Douglas included language used in the 1970 memorandum from DHEW. After the decision, the petitioners (i.e., Lau et al.) only asked that the Board of

Education directed its resources and expertise to fix the problem (*Lau v. Nichols*, 1974). As shown in *United States v. Texas* (1971) and *Lau v. Nichols* (1974), the federal courts had a crucial role in correcting some of the injustices faced by ELL students in the public-school system.

Subsequently, the United States Congress added accountability measures in its education acts to ensure ELL students were not discriminated against and continued to appropriate more funds towards ELL educational programs. In the Education Amendments of 1974, the United States Congress appropriated \$135,000,000 for fiscal year 1974 and 1975, \$140,000,000 for fiscal year 1976, \$150,000,000 for fiscal year 1977, and \$160,000,000 for fiscal year 1978 (Education Amendments, 1974, p. 504). Furthermore, the Education Amendments of 1974 created the Equal Educational Opportunities Act (EEOA). In it, the United States Congress concluded that to keep maintaining a school system in which students are zoned to a school based on their race, color, sex, or ethnic origin effectively denies these students the equal protection of the laws guaranteed by the fourteenth amendment. (Education Amendments, 1974, p. 514) The Education Amendments of 1974 also created an Office of Bilingual Education and a Commissioner of Education whose responsibility was to oversee everything related to bilingual education in the United States (Education Amendments, 1974, p. 509). Among its responsibilities, the newly created Office of Bilingual Education was tasked with creating a report on the condition of bilingual education in the U.S. (Education Amendments, 1974, p. 509). The document would be submitted to Congress and the President, and it would report on how Title VII was administered and operated, as well as any other program(s) related to ELL education (Office of Education, 1976, p. 5).

In the first report on *The Condition of Bilingual Education in the Nation* (1976), the U.S. Commissioner of Education estimated that around 6 percent of the K-12 school population is not proficient in the English language (Office of Education, 1976, p. 8). Moreover, the report stated that Spanish is the language spoken by most ELL students in the U.S. followed by Italian, French, Filipino, German, and Chinese (Office of Education, 1976, p. 8). In addition, the report identified the main challenges to the use of bilingual education in the U.S., which were a lack of instructional materials, not enough qualified teachers, and not enough research indicating that bilingual education is the best instructional approach (Office of Education, 1976, p. 11).

Two years after the report, the Education Amendments of 1978 were enacted into law. The newest reauthorization to the ESEA of 1965 appropriated \$200,000,000 for fiscal year 1979, \$250,000,000 for fiscal year 1980, \$300,000,000 for fiscal year 1981, \$350,000,000 for fiscal year 1982, and \$400,000,000 for fiscal year 1983 (Education Amendments, 1978, p. 127). The Education Amendments of 1978 also addressed the inclusion of ELL students into the regular education classroom. The legislation sought to have ELL students in classes with non-ELL students and receiving, when practicable, the same level courses (Education Amendments, 1978, p. 128). By the late 1970s, the funding for ELL education had increased by 2,500 percent (i.e., since the passage of the Elementary and Secondary Education Amendments of 1967), the schools continued to be desegregated, new programs were created to assist ELL students, but progress was not always linear.

In the case of *Castaneda v. Pickard* (1981), the plaintiffs were a group of Mexican-American students and their parents that represented a group of students under similar circumstances. The group brought a lawsuit against the Raymondville Texas Independent School District (RISD) because they alleged RISD was engaging in educational practices and had

created educational policies to discriminate against Mexican-American students, which in turn denied these group of students of their rights under the fourteenth amendment, Title VI of the Civil Rights Act of 1964, and the Equal Educational Opportunities Act of 1974 (*Castaneda v. Pickard*, 1981). The plaintiffs' argument was that RISD ability grouping system (i.e., to assign students classrooms) was based on racial and ethnic criteria that resulted in classroom segregation (*Castaneda v. Pickard*, 1981). Moreover, RISD neglected to properly implement bilingual education to address the needs of ELL students in the school district, which denied them equal access to the educational program of the school district (*Castaneda v. Pickard*, 1981). In the end, the United States Court of Appeals for the Fifth Circuit "reversed the judgement in favor of defendant school and remanded for further proceedings" (*Castaneda v. Pickard*, 1981). Even though, the court did not find merit in the complaints by the plaintiffs, out of the court decision emerged what is commonly referred to as the Castaneda standard.

The Castaneda standard is a three-pronged test to determine if an ELL program meets the needs intended. First, the court must evaluate if the educational theory or principle is appropriate (*Castaneda v. Pickard*, 1981). Second, the court must determine if the school or school district has the necessary resources to implement adequately the educational theory or principle (*Castaneda v. Pickard*, 1981). Third, having evaluated the educational theory or principle, and the resources (i.e., whether they are appropriate and sufficient), the court needs to determine if the program is producing the results intended (*Castaneda v. Pickard*, 1981). The Castaneda standard gave the courts criteria to formally evaluate ELL programs, but even after its implementation, ELL students were not completely benefiting from the progress made thus far.

In the Condition of Bilingual Education in the Nation (1982), the Secretary of Education reported that an estimated 75 percent of ELL students were receiving special services, according

to the CESS in spring 1978. The CESS is the Children's English and Services Study conducted by L. Miranda and Associates and the data obtained were from children ages 5 to 14 (U.S. Department of Education, 1982, p. 33). A decade after the 1970 memorandum from DHEW, ELL students continued to be placed, in large numbers, in special education programs because of inadequate evaluative assessments (Department of Health, Education, and Welfare, 1970).

Special Alternative Programs

Throughout the 1980s, the Bilingual Education Act experienced a significant reduction in the money appropriated to carry out the provisions of this act. While the Education Amendments of 1978 had appropriated \$400,000,000 for fiscal year 1983 (Elementary and Secondary Education Amendments, 1978, p. 127), the new law appropriated \$176,000,000 for fiscal year 1985 (Elementary and Secondary Education Amendments, 1984, p. 6). In addition, the Education Amendments of 1984 determined that the United States Secretary of Education could reserve up to four percent of the money appropriated for special alternative instructional programs, and any other related activities authorized by the legislation (Augustus F. Hawkins-Robert T Stafford Elementary and Secondary School Improvement Amendments, 1984, p. 6). It meant that the Department of Education could spend up to four percent of its ELL education budget to fund different programs other than bilingual education. After all, the Bilingual Education Act of 1968, stated, as a goal, to provide federal assistance to school districts to create and implement new and innovative elementary and secondary school programs designed to meet the special educational needs of ELL students (Elementary and Secondary Education Amendments, 1967, p. 816).

In the Education Amendments of 1988, the appropriations for the Bilingual Education Act increased slightly to \$200,000,000 dollars for fiscal year 1989, and the United States Secretary of Education had the ability to reserve up to 25 percent of the money appropriated for

special alternative instructional programs, and any other related activities authorized by the legislation (Augustus F. Hawkins-Robert T Stafford Elementary and Secondary School Improvement Amendments, 1988, p. 146). The amount of funding for these special alternative instructional programs increased 21 percent in four years and represented a shift in the method of ELL instruction the federal government was supporting (Augustus F. Hawkins-Robert T Stafford Elementary and Secondary School Improvement Amendments, 1988, p. 146). Originally, the Elementary and Secondary Education Amendments of 1967 did not designate bilingual education as the main ELL instructional method, but in practice, until the Education Amendments of 1984 it was the major instructional method funded. The administration of President Reagan, under Secretary of Education William J. Bennett, believed in giving school districts increased flexibility in the designing of programs intended to educate ELL students (Werner, 1987). According to the Reagan administration, they did not want to dictate a particular instructional approach, nor they wanted to eliminate bilingual education programs (Werner, 1987). Secretary of Education William J. Bennett stated that if research is not clear as to what is the best instructional approach to educate ELL students, then the federal government should not mandate a specific one (Werner, 1987). The 1980s brought significant changes to the way ELL education was funded and how the federal government supported the different methods of instruction. Throughout this decade, the federal government started to move away from solely supporting bilingual education, as the best method of educating ELL students.

The decade of the 1990s presented different challenges for ELL education. As part of President George H.W. Bush and the nations' governors' educational goals to be met by the year 2000, the Department of Education placed high confidence in the ability of bilingual educational programs to have the ability to address each goal related to ELL student education (U.S.

Department of Education, 1991, p. 4). Even after the Education Amendments of 1984 and 1988 had increased the amount of money spent on special alternative instructional programs, the Department of Education saw bilingual education as an effective way of meeting ELL students' needs. It was also a sign that there were competing ideas in what was the best approach to address the educational needs of ELL students. Furthermore, a concern regarding ELL students was the high dropout rates, which was one of the highest in the United States. In recognition of this concern, one of the educational goals was to increase the high school graduation rate to 90 percent (U.S. Department of Education, 1991, p. 4). Before the passage of the Education Amendments of 1988, several Hispanic groups, knowing that Hispanic children had one of the highest dropout rates in the United States, saw bilingual education as the only way to help students learn English while progressing in the other core subjects (Werner, 1987). Overall, the educational goals strived to have ELL students enter school ready to learn with access to preschool education, and to be proficient in challenging subjects such as English, mathematics, science, history, and geography (U.S. Department of Education, 1991, p. 4). The Department of Education efforts were critical because of the increasing amount of ELL students in the United States.

The Immigration Wave of the 1980s

The Condition of Bilingual Education in the Nation of 1991 reported that there were an estimated 2.2 million ELL students during the 1989-90 academic year (U.S. Department of Education, 1991, p. 8). The report also stated that ELL student populations had not remained stable. The state of California had reported a 14 percent increase in its ELL population between the 1989-1990 academic years (U.S. Department of Education, 1991, p. 8). Unexpectedly, the greatest increases of ELL student populations happened in the Midwest: 38 percent in Montana;

46 percent in Oklahoma; 39 percent in South Dakota; and 36 percent in North Dakota (U.S. Department of Education, 1991, pp. 8-11) Additionally, the report indicated that local education agencies (LEAs) have many programs, but three are used by most: “transitional bilingual education, content English as a Second Language (ESL), and two-way bilingual programs” (U.S. Department of Education, 1991, p. 12). The report did not favor one over the other, but rather stated that if properly implemented all three programs can be effective. Furthermore, the report encouraged LEAs to use the instructional method that best meets the needs of the ELL students in the school district and made it clear that this flexibility is sponsored by federal education policy (U.S. Department of Education, 1991, pp. 12-13). It is this last point that echoes the language in the Education Amendments of 1984 and 1988.

In the early 1990s, there were over two million ELL students out of an approximate student population of forty million (U.S. Department of Education, 1992, p. 74). The 1990 census disclosed that 8 million new immigrants entered the United States during the 1980s, which became the second highest level since the immigration waves at the beginning of the 20th century (U.S. Department of Education, 1992, p. 73). The census also confirmed that immigration increased significantly in the decade of 1980-1990, and with that the population of ELL students enrolling in U.S. schools. The Condition of Bilingual Education in the Nation of 1992 listed the states with the five largest ELL populations: California with 986,462, Texas with 313,234, New York with 168,208, Florida with 83,937, and Illinois with 79,291 ELL students (U.S. Department of Education, 1992, p. 31). In addition, the report stated that California, Florida, and New York had the greatest gains in ELL students during 1991 (U.S. Department of Education, 1992, p. 32). The Condition of Bilingual Education in the Nation of 1992 and the

1990 census highlighted the importance of addressing the needs of ELLs and the need for bilingual education programs (U.S. Department of Education, 1992, pp. 72).

In 1994, the Improving America's Schools Act was enacted, which became the latest reauthorization to the Elementary and Secondary Education Act of 1965. In the new law, the Bilingual Education Act contained similar language as previous reauthorizations, such as educating ELL students to meet same rigorous standards for academic performance that is expected of all students (Improving America's Schools Act, 1994, p. 200). The law mandated that each State plan shall demonstrate that the State has created standardized tests that will assess the state developed or adopted standards. Moreover, the law required that all students participate in standardized assessments, and that ELL students should be tested in the language and form that is going to provide the most accurate and reliable data (Improving America's Schools Act, 1994, p. 8). All student scores will be used, after a student has been enrolled for a full academic year, to determine the progress of the LEA (Improving America's Schools Act, 1994, p. 8). The law recognized the challenges for ELL students to succeed in a country when they are not able to be proficient speakers of the main language. Furthermore, the law appropriated \$215,000,000 for fiscal year 1995, a modest increase from the money appropriated in 1988 (i.e., \$200,000,000) (Improving America's Schools Act, 1994, p. 201). In addition, under findings, the law stated that ELL students are placed disproportionately in special education programs due to the use of evaluative measures that are inadequate (Improving America's Schools Act, 1994, p. 199). It was a fact addressed by the 1970 DHEW memorandum, and by the Condition of Bilingual Education in the Nation of 1982. Yet, after twenty-four years, the practice of qualifying ELL students into special education programs due to inadequate evaluation assessments was still in place.

After the Improving America's Schools Act of 1994, the United States Congress passed legislation that provided a major overhaul to the education system. The No Child Left Behind Act of 2001 (NCLB) promised to improve our education system, and at the start of a new century, sought to close the achievement gap for all student subgroups. Regarding ELL education, the new law replaced Title VII with Title III, and the Bilingual Education Act with the English Language Acquisition, Language Enhancement, and Academic Achievement Act. The law appropriated \$750,000,000 for fiscal year 2002, more than three times the money appropriated in 1994 (i.e., \$215,000,000) (No Child Left Behind, 2001, p. 1689). In addition, the law established a new accountability system to hold State and local educational departments accountable for the progress of ELL students. NCLB required that State educational agencies (SEAs) demonstrated improvements in the language proficiency of ELL students, each academic year; and that ELL students made adequate yearly progress (No Child Left Behind, 2001, p. 1691). For standardized assessments, NCLB set the ELL accountability mark to one year, as the Improving America's Schools Act of 1994 did before. In the end, NCLB created more accountability and mandated more restrictions on State and local educational agencies.

Conversely, the Every Student Succeeds Act of 2015 (ESSA) added more flexibility to State and LEAs. In terms of spending, the law appropriated \$756,332,450 for fiscal year 2017, \$769,568,267 for fiscal year 2018, \$784,959,633 for fiscal year 2019, and \$884,959,633 for fiscal year 2020 (Every Student Succeeds Act, 2015, p. 1954). In comparison to NCLB, spending on ELL education did not increase significantly. As part of a new mandate, the law required that all ELL state plans must show the adoption of the English language proficiency standards of speaking, listening, reading, and writing (Every Student Succeeds Act, 2015, p. 1825). In addition to the expectation that the ELL state plans address the different levels of proficiency

demonstrated by ELL students and that standards are aligned to the state academic standards (Every Student Succeeds Act, 2015, p. 1825). In many cases, different states have turned to standardized tests such as Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLS) aimed to assess the development of English language proficiency of ELL students in elementary through high school to meet the adoption of the English language proficiency standards (Center for Applied Linguistics, 2018, p. 1). Contrary to NCLB, the latest reauthorization to the Elementary and Secondary Education Act of 1965 (i.e., ESSA) set the ELL accountability mark to two years.

In the ESEA of 1967, the U.S. Congress recognized the difficulty of educating ELL students. The U.S. Congress pledged to “carry out new and imaginative elementary and secondary school programs designed to meet these special education needs” (Elementary and Secondary Education Amendments, 1967, p. 816). Since its passage, the appropriations for ELL education have increased exponentially, accountability measures have been created, and training for teachers using research-based methods have become widely available.

Second Language Acquisition Research

The Every Student Succeeds Act of 2015 established a two-year ELL accountability mark. Now that the policy is crafted, it is imperative to understand the findings of second language acquisition research to determine if two years is an adequate timeframe for an ELL student to reach English proficiency. The following sections include research findings on (1) the rate of second language acquisition (i.e., how much time does it take an ELL student to reach English proficiency), (2) the language development of students prior to entering kindergarten, and (3) the problems of testing students for content knowledge before the attainment of English proficiency.

It Takes More than Two Years

Collier (1995) explains that the process of learning a second language through a school curriculum is vastly different from learning English as a foreign language in school (p. 4). In studies done by Collier (1995), the researcher found that ELL students that have not received a formal education in their native language take seven to ten years, or more, to reach the academic proficiency of their peers (p. 7). Furthermore, ELL students that had two to three years of formal schooling, in their first language, before arriving to the United States take a minimum of five to seven years to reach the academic proficiency of their peers (Collier, 1995, p. 7). Lastly, Collier (1995) dispels the idea that motivation is a significant contributor to second language acquisition and reiterates that four to twelve years of second language development is needed “for the most advantaged ELL students” to reach academic proficiency and compete with their non-ELL peers (p. 11).

In *Acquiring a Second Language for School*, Collier (1995) discusses the progress of students taught through bilingual education programs, which was a point of focus of the Elementary and Secondary Education Amendment acts. Normally, according to Collier (1995), students taught through a bilingual education program are able to be proficient, in all content areas in their native language, while developing academic knowledge in the second language (Collier, 1995, p. 8). In addition, these students exceed the performance of non-ELL students, in all core content areas, after four to seven years if they are taught in a quality bilingual education program (Collier, 1995, p. 8). Collier (1995) explains that these students accomplish this because they were able to keep up with their cognitive and academic growth during these four to seven years, which is the time that it usually takes to build academic proficiency in the second

language (Collier, 1995, p. 8). In the end, studies show that students taught in bilingual education programs sustain this level of academic success and outperform their non-ELL peers in the upper grades (Collier, 1995, p. 8)

As described by Collier (1995), in order to be successful, an ELL student must be proficient in academic language, which is to have attained the proper level of understanding of the English language required to comprehend the tests and assignments ELL students are exposed to in school (Carrier, 2005, p. 5). The importance of academic language cannot be understated because it is not sufficient for an ELL student to be able to have a conversation in English (Echevarria & Goldenberg, 2017); additionally, the ELL student needs to be able to comprehend the complexity of grade level text in all core content areas (reading, mathematics, science, and social studies) (Gersten et al., 2007, p. 23).

Carhill, Suarez-Orozco, and Paez (2008) write that not attaining the necessary level of academic English proficiency leads to lower scores on standardized tests (p. 1156). It is especially concerning for middle and high school students because they are exposed to more complex texts, have less time to develop academic language, and do not have access to the same level of language support in school (Carhill, Suarez-Orozco, & Paez, 2008, p. 1156). In their study, Carhill et al. (2008) used data from the Longitudinal Immigrant Student Adaptation (LISA) study to research the rate of second language acquisition among immigrant students in their teenage years (Carhill et al., 2008, p. 1161). The participants were recently arrived immigrant students from several school districts across the Boston and San Francisco metropolitan areas (Carhill et al., 2008, p. 1162).

In total, the study's sample was 274 students that had spent, on average, 6.9 years in the U.S. and were almost 17 years of age by the study's fifth year (Carhill et al., 2008, p. 1165).

After almost seven years, Carhill et al. (2008) reported that only 19 students or 7.4 percent of the sample were at or above the average score for an English speaker on the English Language Proficiency subtest (Carhill et al., 2008, p. 1165). Furthermore, 74.8 percent of the sample was one standard deviation or 15 points under the mean; only 25.2 percent of the sample was within one standard deviation of the average non-ELL student of their age (Carhill et al., 2008, p. 1165). The age of the students, and the time they had resided in the United States remained significant throughout the study (Carhill et al., 2008, p. 1170). Moreover, maternal education and the level of English skills from the parents were significant, at first, but decreased as the students were exposed to English in their respective schools (Carhill et al., 2008, p. 1170). The study utilized the English Language Proficiency subtest of the Bilingual Verbal Ability Tests (BVAT), which is designed to measure a student's bilingual verbal ability or the cognitive and academic language abilities a bilingual individual possesses (Munoz-Sandoval, Cummins, Alvarado, & Ruef, 1998).

MacSwan and Pray (2008) selected a school district in Central Arizona because it had a well-established bilingual education program and because it used the Bilingual Syntax Measure (BSM) (p. 663). The BSM

assesses a wide range of tacit knowledge of syntax, including simple and complex sentences, declaratives and interrogatives, sentential truncation, clausal subordination, conditionals, indirect questions, the use of subjects, negation, auxiliaries, adverbs, prepositions; internal constituent structure of noun phrases, verb phrases, prepositional phrases; auxiliary sequences involving progressives, perfect regular/irregular, present, past, future; subject-verb agreement; and wh-question constructions. (MacSwan & Pray, 2010, p. 665)

The BSM was given to students, in the Central Arizona school district, that indicated that another language, other than English, was spoken at home. The BSM I is given to students in grades K-2, and the BSM II is used with students in grades 3-12. If the student score indicated

that he or she was not proficient in English, the student was enrolled in a bilingual classroom (MacSwan & Pray, 2008, p. 664). The study's sample were 89 ELL students from six schools in the Central Arizona school district that were enrolled in a bilingual education program (MacSwan & Pray, 2010, p. 666). The study found that it took, on average, 3.31 years for students in the sample to achieve a score of 5 or 6 on the BSM indicating English proficiency (MacSwan & Pray, 2010, p. 667). In addition, the study found that 68.5 percent of the students, in the sample, were able to become English proficient after four years, and after five years 92.13 percent were able to do so (MacSwan & Pray, 2010, p. 667).

In a study for the Regional Education Laboratory Northeast and Islands, Kieffer and Parker (2016) continue to challenge the assumption that two years is adequate time to acquire English language proficiency. The study used longitudinal administrative data aimed to answer the question of how long it takes an ELL student to become reclassified (Kieffer & Parker, 2016, p. i). In the study, reclassification is defined as the time it takes an ELL student to score proficient in the New York State English as a Second Language Achievement Test (Kieffer & Parker, 2016, p. 2). Furthermore, the study defined long-term English language learner, as an ELL student requiring six or more years of language services before becoming proficient on the New York State English as a Second Language Achievement Test (Kieffer & Parker, 2016, p. 1). Kieffer and Parker (2016) found that 52 percent of the ELL students that started school in kindergarten became reclassified by the third grade, if they were not retained (p. 5). In addition, the study found that by the six-year mark, 75 percent of the ELL students had become reclassified (p. 5). Moreover, the time of school entry (i.e., what grade was the student enrolled) into New York City public schools had a significant impact into how long it took an ELL student

to become reclassified from estimates ranging from three to more than five years (Kieffer & Parker, 2016, p. 6).

Language Development Prior to Formal Schooling

Hammer, Lawrence, and Miccio (2008), studied language development in bilingual children throughout childhood after identifying a dearth in the literature (p. 33). The study by Hammer et al. (2008) focused on the receptive language development of students identified as bilingual students during a two-year period (p. 33). The participants in the study were 83 children attending Head Start programs in urban centers in Central Pennsylvania (Hammer, Lawrence, & Miccio, 2008, p. p. 33). The study tested the receptive language abilities of the children during fall and spring of the two years the children spent in Head Start. Hammer et al. (2008) indicated that they utilized the Peabody Picture Vocabulary-III and the Test de vocabulario imagenes-Peabody to assess the children's receptive vocabularies in both English and Spanish (p. 36). Furthermore, the study also administered the Test of Early Language Development-3 and the auditory comprehension subtest of the Preschool Language Scale 3 to assess the children's English language comprehension abilities and their Spanish language comprehension abilities respectively (Hammer et al., 2008, p. 36).

In its findings, Hammer et al. (2008) reported that the timing the children were exposed to English, as it relates to their start in school, has an impact on the development of the student's English, as well as Spanish (p. 52), a finding Carhill et al. (2008) also reported. Moreover, the study found that the children's English language abilities increased over the two years in the Head Start program (Hammer et al., 2008, p. 53). The study showed that the bilingual children were making gains on students that spoke only one language and it suggested that the language development of bilingual children follows a linear trajectory (Hammer et al., 2008, p. 53).

Bumgarner and Lin (2014), aimed to examine whether early childhood education has a positive impact in the English language proficiency of first- and second-generation Hispanic immigrant children when they start kindergarten (p. 516). The study explored if this connection is stronger for first- and second-generation Hispanic immigrant children with a lower socioeconomic status (SES) (Bumgarner & Lin, 2014, p. 516). The study found that 43 percent of first- and second-generation Hispanic immigrant children attended early childhood education (Bumgarner & Lin, 2014, p. 521). Attendance was related to socioeconomic status, the number of siblings, and the English language skills of the parents (Bumgarner & Lin, 2014, p. 523). Han, Vukelich, Buell, and Meacham (2014) write that a significant number of households where English is not spoken are households with low-income whose parents are not highly literate in any language (Han, Vukelich, Buell, & Meacham, 2014, p. 841). The implications of the study are that less than half of the first- and second-generation ELL students are attending early childhood education and SES seems to be their primary challenge. It is troublesome because the study found that those students that were exposed to early childhood education were more likely to be proficient in English than those first and second-generation Hispanic immigrant children that did not participate (Bumgarner & Lin, 2014, p. 526).

According to ESSA, the two-year mark is when ELL students should be proficient, albeit of the academic challenges encountered. The law does not consider that ELL students must achieve English language proficiency, while keeping pace with grade level academic content (MacSwan & Pray, 2010, p. 655). Studies have shown (Collier, 1995; Carhill et al., 2008; Hammer et al., 2008; MacSwan & Pray, 2010, Bumgarner & Lin, 2014; Kieffer & Parker 2016) that ELL students need time, and that variables such as age of exposure, parental education, SES status, and prior schooling influence the rate of language acquisition. Currently, there is an

inherent disconnect between second language acquisition research and the expectations set forth by ESSA and previous Elementary and Secondary Education Act reauthorizations for ELL students.

As an example of the disconnect between the law and the research, Professor Emeritus Kenji Hakuta of Stanford, a lifelong researcher of English language acquisition, writes his experience before a subcommittee on an Elementary and Secondary Education Act (ESEA) reauthorization. The late Senator Claiborne Pell of Rhode Island asked Professor Hakuta how long it takes an ELL student to learn English (Hakuta, 2011, p. 167). Professor Hakuta answered that it takes five to seven years to attain English proficiency (Hakuta, 2011, p. 167). The Senator disagreed with the professor's assessment, he thought it should take six months (Hakuta, 2011, p. 167). Hakuta (2011) concluded that there is not a theory of second language acquisition that would propose one year as enough time for an ELL student to reach English language proficiency (p. 167). The expert testimony of Professor Hakuta is grounded on research, while the expectations of Senator Pell were grounded on personal opinion. Years after the encounter, the professor concluded that it could take four to seven years for 80 percent of students to attain English proficiency (Hakuta, 2011, p. 167).

Problems with Standardized Testing

The fact that second language acquisition research has demonstrated that two years is not adequate time (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016) for an ELL student to develop English language proficiency, should be especially concerning to states and school districts with high ELL student populations such as Florida. Based on these findings (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016), millions of ELL students, throughout the U.S., are taking standardized tests that are measuring their

language proficiency and not their content knowledge. Butler and Stevens (2001) state that standardized tests pose a significant reading challenge, and conflict with the assessment of the content learned for ELL students that are still developing their English language proficiency (p. 411). Since these students have not reach English language proficiency, they are not able to adequately participate in the assessment rendering the information obtained from such assessment invalid (Butler & Stevens, 2001, p. 411).

Moreover, Kopriva (2000) explains that the academic achievement of ELL students is being measured with instruments that were created to test non-ELL students (p. 5). In discussing norm-referenced measurement (NRM), Davidson (1994) refers to norms appropriacy or how well the results of an assessment represent the population it was designed for (p. 83). Contrary to measuring the proficiency of students in a skill or set of standards, norm-referenced tests determine where a student ranks, in comparison, to his or her peers (Kubiszyn & Borich, 2013, p. 89). According to Davidson (1994), the Illinois standardized test was developed for non-ELL students but was used with ELL students with a Hispanic background, yet Hispanic children were not included in the original norm group (p. 83). If this criterion and/or norm referenced test were written for students assumed to be proficient in the academic language of the test, then ELL students who are not proficient in this language are not being properly assessed. It is a point that Kopriva (2000) reinforces, stating that standardized tests have too many issues that affect the measurement of the content assessed because it is being given to students that have not achieved English language proficiency (p. 5). Kopriva (2000) states that limited English proficient students (i.e., ELL) are hampered by the design of the tests because it does not allow them to demonstrate how much they know about a particular subject area (p. 5).

In the state of Florida, thousands of ELL students take the Florida Standards Assessment

(FSA). The FSA is a criterion-referenced test utilized to determine proficiency in reading, mathematics, and end-of-course subjects (e.g., algebra 1 and geometry) (Florida Department of Education, 2018). A criterion-referenced test is a test that assesses a student's level of proficiency in a skill or set of standards (Kubiszyn & Borich, 2013, p. 89). ELL student scores, in the FSA, count towards accountability formulas, after two years, because of the two-year ELL accountability mark established by ESSA. However, if these students are not language proficient, then the FSA is testing their language skills and not their content knowledge in the different subjects. The FSA was not designed to test language proficiency, but rather it was designed to test proficiency in the state approved standards. As a result, any student that is not language proficient at the time of taking the FSA is prematurely assessed, negatively impacting their progress, the school he or she attends, and by extension his or her school district.

Assessing Comprehension and Communication in English State-to-State for English Language Learners (WIDA)

In order to measure English language proficiency and to support the growth of ELL students in accordance to the accountability objectives set forth by ESSA, the state of Florida, as well as 38 other states, more than 400 international schools, and U.S. territories (WIDA, 2018), are using the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) developed by the World-Class Instructional Design and Assessment (WIDA) Consortium (Fox & Fairbairn, 2011, p. 425). The WIDA Consortium was formed in the states of Wisconsin, Delaware, and Arkansas, and was supported by an education grant, in 2003, from the U.S. Department of Education. Its goal was to create a “standards and assessment system” to meet the legal requirements regarding ELL students mandated by NCLB (Fox & Fairbairn, 2011, p. 425).

ACCESS for ELLs was released in 2005 by the Center for Applied Linguistics (CAL) and it has been supported by the Wisconsin Center for Education Research at the University of Wisconsin-Madison where the WIDA Consortium is currently located (Fox & Fairbairn, 2011, p. 425). The test is aligned to the English language proficiency standards of speaking, listening, reading, and writing (Every Student Succeeds Act, 2015, p. 1825) and it is divided in different grade clusters (e.g., kindergarten, 1-2, 3-5, 6-8, and 9-12), which the test developers describe as the “horizontal dimension of the test” (Fox & Fairbairn, 2011, p. 427). Furthermore, the test also has a “vertical dimension”, which are three tiers and those are: A for beginning ELL students, B for intermediate ELL students, and C for advanced ELL students (Fox & Fairbairn, 2011, p. 427).

ACCESS for ELLs reports student scores in each of the language domains of speaking, listening, reading, and writing by determining an ELL students WIDA language proficiency level (i.e., 1 – Entering, 2 – Beginning, 3 – Developing, 4 – Expanding, 5 – Bridging, and 6 – Reaching) (Fox & Fairbairn, 2011, p. 428). ELL students in the Entering level have the lowest English language proficiency, while students at the Reaching level are proficient in the English language. Every student taking the test receives a score in each of the four English language domains and a composite score in oral Language, literacy, and on the overall test (WIDA, 2017). The test is used by the state of Florida to chart the progress of ELL students and to support ELL students as they strive to achieve English language proficiency (Florida Department of Education, 2018).

ELL Students in the State of Florida

In addition to federal protections, ELL students in Florida are protected by the 1990 Consent Decree. The settlement agreement was adopted between the plaintiffs, the League of

United Latin American Citizens (LULAC) et al., and the defendants, the Florida Board of Education and Florida Department of Education et al. The Consent Decree has six different parts: the Identification and Assessment, the Equal Access to Appropriate Programming, Equal Access to Appropriate Categorical and other Programs for LEP (Limited English Proficient) Students, Personnel, Monitoring Issues and Outcome Measures for ELL students. The first section of the Consent Decree, the Identification and Assessment, addressed the initial identification of the student to determine if he or she needs ELL services. Moreover, this section of the Consent Decree established a limited English proficient (LEP) committee to determine if a student qualifies or if a student does not longer need ELL services and needs to be exited from the program.

The second section of the Consent Decree, Equal Access to Appropriate Programming, covered the access of the ELL student to appropriate education. Depending on the level of the ELL student, the access could be to ESOL classes or intensive mathematics and English language arts classes. In the third section, Equal Access to Appropriate Categorical and Other Programs for LEP Students, the Consent Decree ensured that ELL students have equal access to “other appropriate programs such as compensatory, exceptional, early childhood, vocational, and adult education as well as to drop-out prevention and other supportive services” (p. 15). The fourth section of the Consent Decree, Personnel, defines the criteria that is needed to be able to add the ESOL endorsement to a teacher’s license. The fifth section, Monitoring Issues, goes over how the FLDOE will constantly monitor school districts to ensure they are following all provisions of the Consent Decree. The sixth section of the Consent Decree, Outcome Measures, forced the state of Florida to create an evaluation system that contained outcome measures to determine how Federal and State law was fulfilled regarding ELL students.

The Constitution of the state of Florida also protects ELL students in the state and it is aligned to the four language skills referenced by ESSA: listening, speaking, reading, and writing (Florida Legislature, 2017). Even when affording ELL students accommodations and protections, both at the federal and state level, the U.S. government has created laws that negatively impact the progress of these group of students. In 2014, Rick Scott, the Governor of the state of Florida, wrote a letter to the United States Secretary of Education, Arne Duncan, objecting the one-year accountability mark established by the No Child Left Behind Act of 2001 (NCLB). The state was requesting a waiver from the federal law because it did not agree that one-year was adequate time for an ELL student to reach language proficiency. In the year 2000, the state had enrolled 187,566 ELL students or 7.7 percent in its public schools (National Center for Education Statistics, 2017). By 2015, the ELL population, in Florida, had increased to 268,189 or 9.6 percent, an increase of 80,000 ELL students in fifteen years (National Center for Education Statistics, 2017). If these ELL students were prematurely assessed, the state would suffer because these scores would be part of the accountability formulas used to rate schools, and to evaluate teacher performance.

In the letter, Governor Scott requested a USDOE hearing because the department had denied the request for a waiver from the accountability plan established by NCLB (Scott, 2014). In an effort to be responsive to the needs of the ELL students in the state, the Florida legislature passed legislation extending the ELL accountability mark from one year to two. The Governor stated that one year is not enough time and using ELL student scores after one year would adversely impact Florida's schools and school districts (Scott, 2014). The letter cited research to support the government's assertion that one year (i.e., NCLB policy dictates that ELL student scores count after one year of enrolling in a United States school) is not enough time to measure

ELL student's proficiency on a standardized test. In the end, Governor Scott wanted the USDOE to end a "one size fits all" policy and reiterated, that the amendment that the Florida legislature had passed was essential to the state of Florida, and that it would help the state in its record success of educating more than 265,000 ELL students (Scott, 2014).

Althea Valle, the English for Speakers of Other Languages coordinator for Leon County Schools, says that it is difficult to say that after two years an ELL student will be proficient on a standardized test, so after one year it is definitely not possible (Jordan, 2014). The Florida Commissioner of Education, Pam Stewart, stated that Hispanic students in the state of Florida are leading the nation in national assessments, advancement placement courses, and graduation rates (Jordan, 2014). Furthermore, the Commissioner of Education added, given the fact that Florida is having tremendous success with ELL students, she does not see the need of the federal government to step in (Jordan, 2014). The superintendent of Miami-Dade School District, Alberto Carlvalho, a school district with over 72,000 ELL students, says that one year is not enough time and asking students to demonstrate proficiency in such a short time it is unfair and unreasonable. He added that providing ELL students in Miami-Dade with an additional year helps improve language proficiency by 28 percent (Jordan, 2014).

In December, the USDOE responded that it will allow the state of Florida to use ELL student scores after two, not one year of enrolling in a U.S. school. The letter from the USDOE approved the proposed amendment hereby exempting ELL students from the performance component for those ELL students with less than two years in a U.S. school (Delisle, 2014). The impact of the policy cannot be understated, as these test scores are used in accountability formulas that calculate school letter grades and teacher evaluations (Veiga, 2014). In the end, ELL students will be tested using standardized test, but their learning gains, not their proficiency

levels will be calculated into the accountability formulas prior to completing two years in a U.S. school (Veiga, 2014). The amendment Florida requested became official with the passage of ESSA. It was an important first step to recognize that one year was not enough time, as the state continues to add more ELL students due to political unrest and natural disasters.

After Hurricane Maria impacted Puerto Rico in September of 2017, the devastation in the island resulted in an exodus. The figure could be as high as 140,000 Puerto Ricans that left the island since the Category 4 storm hit (Harris, 2017). In addition, it is estimated that some 14,000 students are among those that left (Harris, 2017). As Florida is welcoming Puerto Rican students, the political and economic crisis in Venezuela is also triggering a wave of immigrants from the South American country (Gurney, 2017). One of Miami-Dade school districts School Board members, Susie Castillo, says that people are arriving every day (Gurney, 2017). A Miami-Dade school district volunteer, Lorena Mepa, says that, on average, ten families are arriving every week (Gurney, 2017). The influx of ELL students is concerning because the students are going to be held accountable after two years of enrolling in a U.S. school, whether they are language proficient or not.

In the most recent report (2017) by the National Assessment of Education Progress (NAEP), commonly known as the Nation's Report Card, the significant gap between ELL students and non-ELL students, in reading, remained unchanged from 2007 to 2017 (U.S. Department of Education, 2018). Furthermore, the NAEP results for eight grade reading, fourth grade mathematics, and eight grade mathematics also show similar results (U.S. Department of Education, 2018). The NAEP "is the largest nationally representative assessment of what students know" in a variety of subjects including mathematics and reading (U.S. Department of Education, 2018). Essentially, the NAEP scores indicated that ELL student progress has been

stagnant for the last ten years. The NAEP scores are similar to what has been reported by the National Clearinghouse for English Language Acquisition (NCELA) in Florida. NCELA stated that only 30% of ELL students were making adequate progress toward English proficiency during the 2013-14 academic year. Furthermore, NCELA stated that only 15% of ELL students were able to attain English proficiency during the 2013-14 academic year. ELL students represent a significant portion of the public-school population and the fact that they are not making adequate progress is troublesome.

On the other hand, the state of Florida did not agree to test ELL students in their native language, an accommodation permitted by ESSA.

The inclusion of English learners, who shall be assessed in a valid and reliable manner and provided appropriate accommodations on assessments administered to such students under this paragraph, including, to the extent practicable, assessments in the language and form most likely to yield accurate data on what such students know and can do in academic content areas, until such students have achieved English language proficiency. (Every Student Succeeds Act, 2015, p. 1826)

The state made it official in their last ESSA plan submitted to the USDOE. In a letter to United States Secretary of Education, Betsy DeVos, The Leadership Conference on Civil and Human Rights expressed their disapproval on the decision to not test ELL students in their home language and urged the Secretary of Education to review the plan (The Leadership Conference on Civil and Human Rights, 2017).

Summary

Since the passage of the 1967 ESEA, the United States Congress has recognized the importance of addressing the needs of ELL students. They have increased the appropriations designated for ELL education, substantially, as well as supported bilingual education, and special alternative programs designed to meet the needs of ELL students. In addition to creating accountability measures aimed to ensure that ELL students have access to equal education by

mandating that state education agencies and local education agencies report on the progress of ELL students. Moreover, the federal courts have also played a meaningful role in the advancement of ELL rights, and at times, were the reason the accountability measures were created. Yet, according to research (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016), the two-year ELL accountability mark is not an appropriate timeframe for ELL students to reach English proficiency. The study will expand the understanding (i.e., within the context of a large suburban school district in which the issue is highly relevant) of how ESSA is affecting this subgroup of students.

CHAPTER THREE: METHODOLOGY

Introduction

The goal of the study was to answer research questions related to the performance of ELL students over a two-year period while enrolled in an ELL program and to differences in academic growth between ELL and non-ELL students during the same period of time. Extending these analyses, the study also sought to determine whether and how the academic growth trajectories support or call into question the two-year ELL accountability mark established by the federal government. The following chapter contains the (1) research design, (2) population, (3) instrumentation, (4) data collection, and (5) data analysis for the study.

Research Questions

The study sought to answer three research questions:

1. In what ways and to what extent does the performance of ELL students improve during the first two years of participating in an ELL program?
2. In what ways and to what extent does the academic growth of ELL students differ from non-ELL students during the first two years of participating in an ELL program?
3. To what extent does the academic growth trajectory of ELL students support or call into question policies related to standardized testing?

Research Design

The study is a quantitative study that implemented a casual-comparative design and utilized visual analysis, descriptive statistics, and a factorial two-way ANOVA to analyze the data from *i-Ready* diagnostic assessments in both mathematics and reading. In addition, to account for the different levels of English language acquisition, the study included Assessing

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WIDA tier scores (i.e., A, B, or C) in the descriptive and visual analyses.

Population

The study participants were all students in grades six, seven, and eight from eight middle schools, three K-8 schools, and one 6-12 school in the same school district with valid mathematics and reading *i-Ready* diagnostic scores from the 2016-17 and 2017-18 academic years. Furthermore, the students' scores utilized in the study are from students attending traditional schools; students' scores from schools not participating (i.e., private, charter, or the school district's expulsion school) were not included in the analyses. The students ages ranged from ten to 16 years old, and 49.7% were female, and 50.3% were male. In addition, 16.2% of the students were LY, 16% ESE, and 45.3% qualified for free/reduced lunch.

Instrumentation

The study utilized two instruments, the *i-Ready* Diagnostic and the WIDA assessment. The *i-Ready* Diagnostic was used to determine the progress in mathematics and reading of both ELL and non-ELL students during the two-year period. In turn, the WIDA assessment identified the level of English acquisition of the LY students in the study.

The *i-Ready* Diagnostic

The *i-Ready* diagnostic, designed by Curriculum Associates' in both mathematics and reading, is an assessment that K-12 students take in the school district to determine the strengths and weaknesses of students in relation to the state approved standards. The assessment questions in both diagnostics are multiple-choice questions that adapt depending on how the student answers the questions. If the student answers a question correctly, the diagnostic will give the student a more difficult question. In turn, if the student answers a question incorrectly, the

diagnostic will give him or her a question that is easier. By doing so, the diagnostic is able to pinpoint the actual performance level of the student.

In the Reading diagnostic, the foundational skills domain is composed of phonological awareness (i.e., grades K-1), phonics (i.e., grades K-4), and high frequency words (i.e., grades K-3) (Curriculum Associates, 2015, p. 18). The vocabulary, comprehension of informational text, and comprehension of literary text domains are assessed throughout grades K-12 (Curriculum Associates, 2015, p. 18). Once the student completes the diagnostic, the student will receive an overall reading score, as well as a score in each of the tested domains. The overall reading score is an indication of what skills has the student mastered up to that point. To determine “on grade level” scale scores, one would match the student’s grade level with the reading placement (e.g., Grade 6 = Level 6, Grade 7 = Level 7, and Grade 8 = Level 8) (Curriculum Associates, 2015, p. 30).

Table 5
i-Ready Reading Scale Scores and Placement Levels

Reading Placements	Student Grade Level		
	Grade 6	Grade 7	Grade 8
Level K	0-418	0-418	0-418
Level 1	419-475	419-475	419-475
Level 2	476-498	476-498	476-498
Level 3	499-541	499-541	499-541
Level 4	542-565	542-565	542-565
Level 5	566-597	566-582	566-582
Level 6	598-653	583-608	583-593
Level 7	654-669	609-669	594-619
Level 8	670-684	670-684	620-684
Level 9	685-800	685-703	685-703
Level 10	N/A	704-800	704-723
Level 11	N/A	N/A	724-800

Source: Adapted from the “*i-Ready Diagnostic & Instruction: User Guide*” by Curriculum Associates, LLC, 2015.

In the mathematics diagnostic, the numbers and operations, Geometry, and measurement and data domains are assessed in grades K-8 (Curriculum Associates, 2015, p. 19). The Geometry and measurement domain are only assessed in grades 9-12, and the algebra and algebraic thinking domain is assessed throughout K-12 (Curriculum Associates, 2015, p. 19). As with the Reading diagnostic, the student will receive an overall mathematics score, as well as a score in each of the tested domains. The overall score is an indication of what skills has the student mastered up to that point.

Table 6
i-Ready Mathematics Scale Scores and Placement Levels

Mathematics Placements	Student Grade Level		
	Grade 6	Grade 7	Grade 8
Level K	0-388	0-388	0-388
Level 1	389-414	389-414	389-414
Level 2	415-435	415-435	415-435
Level 3	436-449	436-449	436-449
Level 4	450-464	450-464	450-464
Level 5	465-494	465-479	465-479
Level 6	495-564	480-507	480-492
Level 7	565-574	508-574	493-517
Level 8	575-585	575-585	518-585
Level 9	586-800	586-598	586-598
Level 10	NA	599-800	599-610
Level 11	NA	NA	611-800

Source: Adapted from the “*i-Ready Diagnostic & Instruction: User Guide*” by Curriculum Associates, LLC, 2015.

The *i-Ready* diagnostic is currently used by 50 school districts in the state of Florida (Curriculum Associates, 2017). The company behind the diagnostic, Curriculum Associates, alongside the Educational Research Institute of America (ERIA), conducted a study to explore the relationship between the *i-Ready* diagnostic and the 2016 Florida Standards Assessment (FSA). The objective of the study was to determine if there was a correlation between the scores in the *i-Ready* diagnostic, in both mathematics and reading, and the scores in the FSA

(Educational Research Institute of America, 2017, p. 4). In addition, the study wanted to determine if the *i-Ready* diagnostic, in both mathematics and reading, could be used to predict students' proficiency on the FSA (Educational Research Institute of America, 2017, p. 4). The *i-Ready* diagnostic scores and FSA scores utilized in the study were from the 2015-2016 academic year. Moreover, the study participants were students in third through eighth grade, from 524 schools in 12 school districts across the state (Educational Research Institute of America, 2017, p. 5). Since the school district utilizes the *i-Ready* diagnostic scores as formative data to prepare students for the FSA, the results of this study are meaningful. The correlation between the spring *i-Ready* diagnostic (i.e., the last diagnostic before the FSA) in reading and the reading FSA was 0.84 for sixth grade, 0.82 for seventh grade, and 0.83 for eighth grade; the study reports that all correlations are statistically significant $p \leq .0001$ (Educational Research Institute of America, 2017, p. 10). For the spring mathematics *i-Ready* diagnostic and FSA mathematics FSA, the study reported a correlation of 0.87 for sixth grade, 0.83 for seventh grade, and 0.74 for eighth grade (Educational Research Institute of America, 2017, p. 11). The study reports that all correlations are statistically significant $p \leq .0001$ (Educational Research Institute of America, 2017, p. 11).

To assess the “binary categorical outcome”, or whether the *i-Ready* diagnostic in both mathematics and reading is able to predict what student is going to be proficient or not proficient, as it relates to the FSA, the study used the Area Under the Curve (AUC) from Receiver Operating Characteristic (ROC) curve analyses (Educational Research Institute of America, 2017, p. 11). The study reported that the AUC values for Reading in grade level six were 0.94, 0.91 for seventh, and 0.86 for eighth (Educational Research Institute of America, 2017, p. 11). In mathematics, the AUC values were 0.92 for grade level six, 0.91 for seventh, and

0.90 for eighth (Educational Research Institute of America, 2017, p. 11). The reading *i-Ready* diagnostic was able to accurately predict proficiency in the reading FSA for 85% of sixth grade students, 85% of seventh grade students, and 84% of eighth grade students (Educational Research Institute of America, 2017, p. 13). In addition, the mathematics *i-Ready* diagnostic was able to accurately predict proficiency in the mathematics FSA for 89% of sixth grade students, 87% of seventh grade students, and 85% of eighth grade students (Educational Research Institute of America, 2017, p. 13).

In conclusion, the comparison between the predicted reading FSA from the spring *i-Ready* was 51% in sixth grade, and the observed FSA score was 49% (Educational Research Institute of America, 2017, p. 14). For seventh grade, the predicted score was 48%, and the observed FSA score was 47% (Educational Research Institute of America, 2017, p. 14). In eighth grade, the predicted score was 56%, and the observed FSA score was 55% (Educational Research Institute of America, 2017, p. 14). The predicted scores for the *i-Ready* mathematics diagnostic and FSA mathematics assessment were similar to the reading results. The predicted score for the *i-Ready* mathematics diagnostic in sixth grade was 49%, and the observed FSA score was 49% (Educational Research Institute of America, 2017, p. 14). The predicted score for seventh grade was 53%, and the observed score was 52% (Educational Research Institute of America, 2017, p. 14). Lastly, the predicted score for eighth grade was 48%, and the observed FSA score was 47% (Educational Research Institute of America, 2017, p. 11).

Table 7

Comparison of Predicted and Observed Proficiency Rates for 2016 FSA

Grade Level	Spring <i>i-Ready</i>	FSA Reading	Spring <i>i-Ready</i>	FSA
	Reading		Mathematics	Mathematics
	Diagnostic		Diagnostic	
6th	51%	49%	50%	49%
7th	48%	47%	53%	52%
8th	57%	55%	48%	47%

Source: Adapted from the “*i-Ready* Diagnostic Florida Standards Assessments (FSA) Validity Study by the Educational Research Institute of America, 2017”.

As of 2017, the Florida Department of Education (FLDOE) gave permission to private schools, in the state, that participate in the Florida Tax Credit Scholarship Program or Gardiner Scholarship Program, to use *i-Ready* “as an approved norm-referenced assessment” (Curriculum Associates, 2017). The former helps low-income families with tuition to assist them in attending Florida private schools. The latter helps families with disabled students pay for tuition, as well.

Assessing Comprehension and Communication in English State-to-State for English Language Learners (WIDA)

The WIDA assessment is used in more than 400 international schools, U.S. territories, and 38 other states, in addition to Florida, to assess the progress of ELL students towards English language proficiency in grades K-12 (WIDA, 2018; Center for Applied Linguistics, 2018, p. 1). The assessment describes the English language development of ELL students in four domains: Listening, Reading, Writing, and Speaking (Center for Applied Linguistics, 2018, p. 3). Even though WIDA is available in an online version, the state of Florida uses the paper-based

assessment. In the assessment, the progress of ELL students is measured in five levels: Entering, Emerging, Developing, Expanding, and Bridging (Center for Applied Linguistics, 2018, p. 3). The assessment delineates the path of ELL students towards English language proficiency with a six level, Reaching, indicating the acquisition of English language proficiency (Center for Applied Linguistics, 2018, p. 3). In addition to the five levels, ELL students are assigned a Tier (i.e., WIDA Tier A, WIDA Tier B, or WIDA Tier C) to describe their level of English language proficiency (Center for Applied Linguistics, 2018, p. 5). ELL students in WIDA Tier A are located within the first level entering, second level emerging, and third level developing, which indicate that they are at the early stages of English language acquisition (Center for Applied Linguistics, 2018, p. 6). Moreover, ELL students in WIDA Tier B are located within the emerging, developing, and fourth level expanding indicating that they are progressing towards English language acquisition (Center for Applied Linguistics, 2018, p. 6). Lastly, ELL students in WIDA Tier C are students in the developing, expanding, and fifth level bridging indicating that they have almost acquired English language proficiency (Center for Applied Linguistics, 2018, p. 6).

In addition to reporting ELL student scores in levels of English language acquisition and separating the students into tiers, WIDA reports both scale scores and proficiency level scores (Center for Applied Linguistics, 2018, p. 11). The scale scores ranged from 100 to 600 and all the four language domains are reported: Listening, Reading, Writing, and Speaking. Furthermore, there are four composite scores that ranged from 100 to 600, as well, and are given in: Oral Language, Literacy, Comprehension, and Overall Composite (Center for Applied Linguistics, 2018, p. 11). The composite scores are calculated using the weighting scheme shown in Table 8.

Table 8
Weighted Percentages for Each of the Composite Scores

Composite Scores	Weighted Percentage
Oral Language	50% Listening + 50% Speaking
Literacy	50% Reading + 50% Writing
Comprehension	30% Listening + 70% Reading
Overall Composite	15% Listening + 15% Speaking + 35% Reading + 35% Writing

Source: Adapted from the “Annual Technical Report for ACCESS for ELLs 2.0 Paper English Language Proficiency Test, Series 401, 2016-2017 Administration”

The WIDA board decided to weigh literacy skills more than oral skills in the overall composite score (Center for Applied Linguistics, 2018, p. 12). The decision was based on the perspective that literacy skills are essential for the development of academic language proficiency (Center for Applied Linguistics, 2018, p. 12). Moreover, WIDA uses proficiency level scores, which are interpretive because they interpret an ELL student scale scores based on “the results of the standard setting study” (Center for Applied Linguistics, 2018, p. 13).

In terms of scoring, the domains of Listening and Reading, “are dichotomously scored” because all items are “selected-response” resulting in a correct or incorrect answer (Center for Applied Linguistics, 2018, p. 18). The Writing domain is centrally scored at the Data Recognition Center (DRC) and it is scored according to the WIDA Writing Rubric, ranging from 1 through 6 (Center for Applied Linguistics, 2018, p. 18). Conversely, the test administrator scores the Speaking domain portion of WIDA at the time of the test. The test taker listens to an audio recording of the question, as the student follows along in his or her test booklet (Center for Applied Linguistics, 2018, p. 21). As the test taker answers the questions, the test administrator is monitoring and scoring the test (Center for Applied Linguistics, 2018, p. 21).

In order to be useful, the validity of WIDA has to be demonstrated to determine if the instrument measures what is intended to measure (Lunenburg & Irby, 2008, p. 181). The validation framework for the WIDA was created at the Center for Applied Linguistics (CAL) and focuses on different parts of the assessment (Center for Applied Linguistics, 2018, p. 30). After developing a set of protocols to ensure all test takers are presented with comparable opportunities to showcase their English language proficiency, the assessment reviews its test items and task, so they don't have issues with bias or sensitivity (Center for Applied Linguistics, 2018, p. 30). Two panels (i.e., content review panel and a bias and sensitivity review panel) from WIDA Consortium states review each item and task (Center for Applied Linguistics, 2018, p. 7). The annual technical report indicates that differential item functioning (DIF) analyses are performed “to determine whether any item or tasks may be biased against certain groups” (Center for Applied Linguistics, 2018, p. 34). The panels are composed of members with different language backgrounds and ethnicities (Center for Applied Linguistics, 2018, p. 7). In addition, the test ensures that all tests are scored consistently. The items in the Listening and Reading domains are scored electronically, and test administrators undergo additional training to be able to administer the speaking portion of the WIDA assessment. Lastly, the writing portion of the assessment is scored according to the WIDA Writing Rubric. The WIDA Consortium reports that they conduct a “single reliability estimate, a stratified Cronbach's alpha” across the three tiers (i.e., WIDA Tier A, WIDA Tier B, or WIDA Tier C) and for each domain: Listening, Reading, Writing, and Speaking (Center for Applied Linguistics, 2018, p. 32). Furthermore, “analyses of Rasch model fit statistics are conducted to show that individual tasks perform appropriately” (Center for Applied Linguistics, 2018, p. 32).

Lastly, the annual technical report states that scale scores received by different test takers in different assessment years retained the same meaning, providing an argument for reliability, by consistently measuring the student’s English language proficiency (Lunenburg & Irby, 2008, p. 183). WIDA developers retained a number of the test items from previous tests for scale maintenance (Center for Applied Linguistics, 2018, p. 32). Moreover, the new items added to the test are “calibrated with anchor items” to ensure the new items are consistent in terms of difficulty (Center for Applied Linguistics, 2018, p. 33).

Data Collection

The study used quantitative data from *i-Ready* diagnostic assessments in mathematics and reading. In addition, the study utilized WIDA tier scores. After a project request was completed, the extant data file was received from the school district. The excel file contained data separated into 11 columns (e.g., grade, name of school, age, ESE status, race, gender, ELL status, overall tier score, free/reduced lunch status, and *i-Ready* diagnostic scores for mathematics and reading from the 2016-17 and 2017-18 academic years). Every student’s grade, the name of the school attended, his or her age, ESE status, race information, gender, ELL status, overall tier score, free/reduced lunch status, and *i-Ready* diagnostic scores in both mathematics and reading were downloaded into the file from FOCUS, the school district’s data repository.

After receiving the excel data file, additional steps were taken to prepare the data for analysis. The text values were converted to numerical values in preparation to the upload into the Statistical Package for Social Sciences (SPSS 23) for analysis. The ESE values in the excel file were collapsed into two variables, ESE and non-ESE. Even though Gifted students are part of an ESE program, coded as L, they were included in the non-ESE group. Furthermore, the ELL values in the excel file were collapsed into two variables, ELL and non-ELL. Only students with

an LY code were included in the ELL group. Students with LZ and LF codes were not included in the ELL group because they had been exited from an ESOL program, and they were either being monitored for two years (LF) or were past the two-year monitoring period (LZ). The socioeconomic status (SES) values were collapsed into two variables low-SES or students that qualify for free/reduced lunch and high-SES or students that do not qualify for free/reduced lunch. Lastly, the data was delimited to only include traditional schools. Students' scores from schools that were designated as private, charter, or the school district's expulsion school were not included in the study. After the data in the excel file were prepared, the data were imported into SPSS 23 for analysis.

Data Analysis

Prior to conducting the analyses to answer the research questions, descriptive statistics for all dependent and independent variables were conducted and reviewed. Additionally, and to provide context, frequencies for school type (i.e., traditional or other) were generated and reviewed. To answer Research Question 1 (*In what ways and to what extent does the performance of ELL students improve during the first two years of participating in an ELL program?*), mean scale scores for *i-Ready* (i.e., mathematics and reading, using the population of all ELL students enrolled in traditional schools) were graphed and compared across the six test administrations using descriptive and visual analysis, and interpreted to identify patterns and trends during the two year period. The process was then repeated using data disaggregated by WIDA tier A, B, or C. A total of 1,067 ELL students, 57.9% of the total ELL enrollment, did not have valid WIDA tier scores reported and were not included in the disaggregated results; their scores are reported as a separate category (i.e., *ELL/NO reported WIDA tier*).

To answer Research Question 2 (*In what ways and to what extent does the academic growth of ELL students differ from non-ELL students during the first two years of participating in an ELL program?*), a factorial two-way ANOVA was conducted to determine whether there was a statistically significant relationship between the dependent variable (i.e., gain scores) and the independent variable (i.e., ELL status), the *main effect* (Steinberg, 2011, p. 337). Table 2 presents the outcome obtained from the interpretation of main effects (i.e., the mean gain score for all ELL students and the mean gain score for all non-ELL students). In addition, the use of a factorial two-way ANOVA allowed for investigating possible *interaction effects* (i.e., in the context of the study, whether the relationship between ELL status and gain scores is moderated by SES or ESE status) and so produces the average gain score for the following categories of students (low-SES and ELL, low-SES and non-ELL, high-SES and ELL, high-SES and non-ELL, ESE and ELL, ESE and non-ELL, non-ESE and ELL, non-ESE and non-ELL) (see Table 3 and Table 4).

To answer Research Question 3 (*To what extent does the academic growth trajectory of ELL students support or call into question policies related to standardized testing?*), the study utilized visual analysis and descriptive statistics. Since the results of the ANOVA indicated that ELL students were making greater gains than their non-ELL counterparts, an ancillary analysis was conducted to produce a hypothetical *additional year* of mathematics and reading scores based on the average gain over the preceding two years. In order to conduct the ancillary analysis, the mean score for all ELL and all non-ELL students, in each test administration, was used to calculate the average gain per year across each group, ELL and non-ELL, and that average gain value was then used to project out one more year.

Summary

The chapter explained how the study was designed and completed to answer the three research questions. The research questions sought to find the differences in performance of ELL students and non-ELL students during a two-year period using both mathematics and reading *i-Ready* diagnostic scores. In addition to utilizing WIDA tier scores to contextualize the level of English acquisition of the students designated as ELL, coded LY, in the study. Moreover, the instruments used, *i-Ready* diagnostic and WIDA, were reviewed, and literature on their validity and reliability was included. The chapter also described the population of the study, which consisted of middle school students in grades sixth through eighth from traditional schools in the

school district. Lastly, the chapter explained how the data were received, collected, and analyzed. The next chapter will include the results of the analyses.

CHAPTER FOUR: RESULTS

Introduction

The study was designed to explore the differences in the performance of ELL and non-ELL students over a two-year period as measured by *i-Ready* diagnostic assessments in both mathematics and reading. The chapter contains: (1) frequency and descriptive statistics to provide background and context for the investigation, (2) descriptive results used to answer Research Question 1, (3) ANOVA results used to answer Research Question 2, and (4) descriptive statistics, reported as gain scores, used to answer Research Question 3. The results of the descriptive data analyses were reported by subgroup designation (i.e., ESE, ELL and non-ELL, and SES status), and the data were further disaggregated by WIDA tier scores (i.e., A, B, or C). The study was guided by the following research questions:

1. In what ways and to what extent does the performance of ELL students improve during the first two years of participating in an ELL program?
2. In what ways and to what extent does the academic growth of ELL students differ from non-ELL students during the first two years of participating in an ELL program?
3. To what extent does the academic growth trajectory of ELL students support or call into question policies related to standardized testing?

Frequencies

The study utilized *i-Ready* diagnostic scores, in both mathematics and reading, from the 2016-17 and 2017-18 academic years. The study participants were students in grades sixth, seventh, and eighth that attended traditional schools. A total of 17,014 student scores were received, but 5,610 student scores were not included because those students attended a private,

charter, or the school district’s expulsion school. In the end, the study included the scores of 11,404 students.

Table 9
Regular School Designation for the Study

	Frequency	Percent
Other School	5610	33.0
Regular School	11404	67.0
Total	17014	100.0

Furthermore, there were 9,562 students that were non-ELL, while 1,842 or 16.2% of the students in the study were designated ELL. In addition, 9,777 of the students did not have a WIDA tier score. Of the students that had a WIDA tier score, there were 265 or 2.3% designated WIDA Tier A (i.e., lowest English language acquisition), 599 or 5.3% designated WIDA Tier B, and 763 or 6.7% designated WIDA Tier C (i.e., highest English language acquisition within ELL students) for a total of 1,627 students with ACCESS for ELLs 2.0 tier scores

Table 10
Frequency Table for ELL Variable and ACCESS for ELLs 2.0 Tier Scores

	Frequency	Percent
Non-ELL	9562	83.8
ELL	1842	16.2
Total	11404	100.0
No Tier Score	9777	85.7
A	265	2.3
B	599	5.3
C	763	6.7
Total	11404	100.0

A total of 9,578 of the students were non-ESE, while 1,826 or 16.0% of the students were designated ESE. Also, 6,240 of the students did not qualify for Free/Reduced Lunch, and 5,164 or 45.3% were identified as students receiving Free/Reduced Lunch.

Table 11
Frequency Table for ESE and SES Variable

	Frequency	Percent
Non-ESE	9578	84.0
ESE	1826	16.0
Total	11404	100.0
Do Not Qualify	6240	54.7
Free/Reduced Lunch	5164	45.3
Total	11404	100.0

Descriptive Statistics

On the first administration of the 2016-17 *i-Ready* mathematics diagnostic, including ELL and non-ELL students, the mean scale score was 449.73 with a standard deviation of 89.10 (n=7,989). The mean scale score for the second administration of the *i-Ready* mathematics diagnostic was 444.70 with a standard deviation of 117.40 (n=8,155). On the third administration, the mean scale score was 467.98 with a standard deviation of 97.07 (n=8,155). The mean scale score was lower on the second administration, when compared to the first administration, a drop of 5.03 scale score points. From the first administration of the *i-Ready* mathematics diagnostic, to the third administration, there was an increase of 18.25 scale score points. On average, students made an improvement of two grade levels, from Level 3 to Level 5, on the 2016-17 diagnostic (i.e., all three administrations).

On the first administration of the 2017-18 *i-Ready* mathematics diagnostic, including ELL and non-ELL students, the mean scale score was 475.63 with a standard deviation of 32.17 (n=7,989). The mean scale score for the second administration of the *i-Ready* mathematics diagnostic was 482.01 with a standard deviation of 32.85 (n=8,776). On the third administration it was 490.48 with a standard deviation of 34.54 (n=9,055). From the first administration to the third administration, there was an increase of 14.85 scale score points, and unlike the 2016-17 academic year, there was not a lower mean score from the first administration to the second. On average, students made an improvement of one grade level, Level 5 to Level 6, on the diagnostic (i.e., all three administrations). In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Table 12
Descriptive Statistics for All Students on the i-Ready Mathematics Diagnostic

Test Administration	N	Mean	Std. Deviation
<i>i-Ready Math 2016-17 Administration 1</i>	7989	449.73	89.10
<i>i-Ready Math 2016-17 Administration 2</i>	8155	444.70	117.40
<i>i-Ready Math 2016-17 Administration 3</i>	8155	467.98	97.07
<i>i-Ready Math 2017-18 Administration 1</i>	8518	475.63	32.17
<i>i-Ready Math 2017-18 Administration 2</i>	8776	482.01	32.85
<i>i-Ready Math 2017-18 Administration 3</i>	9055	490.48	34.54

On the first administration of the 2016-17 *i-Ready* reading diagnostic, including ELL and non-ELL students, the mean scale score was 534.95 with a standard deviation of 109.41

(n=7,990). The mean scale score for the second administration of the *i-Ready* reading diagnostic was 532.60 with a standard deviation of 130.29 (n=8,155). On the third administration, the mean scale score was 571.00 with a standard deviation of 55.10 (n=8,032). The mean scale score was lower on the second administration, when compared to the first administration, a drop of 2.34 scale score points. From the first administration of the *i-Ready* mathematics diagnostic to the third administration, there was an increase of 36.06 scale score points. On average, students made an improvement of two grade levels, from Level 3 to Level 5, on the 2016-17 diagnostic (i.e., all three administrations).

On the first administration of the 2017-18 *i-Ready* reading diagnostic, including ELL and non-ELL students, the mean scale score was 566.60 with a standard deviation of 58.63 (n=8,850). The mean scale score for the second administration of the *i-Ready* reading diagnostic was 573.38 with a standard deviation of 61.50 (n=9,140). On the third administration, the mean scale score was 582.09 with a standard deviation of 60.58 (n=9,296). From the first administration to the third administration, there was an increase of 15.49 scale score points, and unlike the 2016-17 academic year, there was not a lower mean scale score from the first administration to the second. In contrast with the 2016-17 administration of the *i-Ready* reading diagnostic, the increase in the mean scale score points did not translate into a movement of the level, the average Level was 5. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Table 13

Descriptive Statistics for All Students on the i-Ready Reading Diagnostic

Test Administration	N	Mean	Std. Deviation
<i>i-Ready Reading</i> 2016-17 Administration 1	7990	534.95	109.41
<i>i-Ready Reading</i> 2016-17 Administration 2	8155	532.60	130.29
<i>i-Ready Reading</i> 2016-17 Administration 3	8032	571.00	55.10
<i>i-Ready Reading</i> 2017-18 Administration 1	8850	566.60	58.63
<i>i-Ready Reading</i> 2017-18 Administration 2	9140	573.38	61.50
<i>i-Ready Reading</i> 2017-18 Administration 3	9296	582.09	60.58

Descriptive Statistics for Research Question 1

In what ways and to what extent does the performance of ELL students improve during the first two years of participating in an ELL program?

The mean scale score of all the ELL students, for the first administration of the 2016-17 *i-Ready* mathematics diagnostic, was 416.02 with a standard deviation of 82.58 (n=677). On the second administration, including all ELL students, the mean scale score was 402.52 with a standard deviation of 128.50 (n=731). The third administration had a mean scale score of 481.41 with a standard deviation of 56.63 (n=731). There was an increase of 65.39 scale score points

from the first administration to the third, even though, the mean scale score for the second administration was lower than on the first, a drop of 13.51 scale score points.

The mean scale score of all the ELL students, for the first administration of the 2017-18 *i-Ready* mathematics diagnostic, was 444.83 with a standard deviation of 29.34 (n=969). On the second administration, including all ELL students, the mean scale score was 450.48 with a standard deviation of 30.68 (n=1,172). The third administration had a mean scale score of 458.93 with a standard deviation of 32.52 (n=1,316). There was an increase of 14.10 scale score points from the first administration to the third, and there was not a lower mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 mathematics administration. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Table 14
Descriptive Statistics for All ELL Students on the i-Ready Mathematics Diagnostic

Test Administration	N	Mean	Std. Deviation
<i>i-Ready Math 2016-17 Administration 1</i>	677	416.02	82.58
<i>i-Ready Math 2016-17 Administration 2</i>	731	402.52	128.50
<i>i-Ready Math 2016-17 Administration 3</i>	731	481.41	56.63
<i>i-Ready Math 2017-18 Administration 1</i>	969	444.83	29.34
<i>i-Ready Math 2017-18 Administration 2</i>	1172	450.45	30.68
<i>i-Ready Math 2017-18 Administration 3</i>	1316	458.93	32.52

The mean scale score of all the ELL students, for the first administration of the 2016-17 *i-Ready* reading diagnostic, was 462.73 with a standard deviation of 91.82 (n=677). On the second administration, including all ELL students, the mean scale score was 448.24 with a standard deviation of 134.74 (n=731). The third administration had a mean scale score of 498.87 with a standard deviation of 59.81 (n=777). There was an increase of 36.14 scale score points from the first administration to the third, even though, the mean scale score for the second administration was lower than on the first, a drop of 14.49 scale score points.

The mean scale score of all the ELL students, for the first administration of the 2017-18 *i-Ready* reading diagnostic, was 490.79 with a standard deviation of 62.34 (n=971). On the second administration, including all ELL students, the mean scale score was 497.70 with a standard deviation of 66.30 (n=1,190). The third administration had a mean scale score of 511.11 with a standard deviation of 69.71 (n=1,290). There was an increase of 20.32 scale score points from the first administration to the third, and there was not a lower mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 reading administration. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Table 15

Descriptive Statistics for All ELL Students on the i-Ready Reading Diagnostic

Test Administration	N	Mean	Std. Deviation
<i>i-Ready Reading</i> 2016-17 Administration 1	677	462.73	91.82
<i>i-Ready Reading</i> 2016-17 Administration 2	731	448.24	134.74
<i>i-Ready Reading</i> 2016-17 Administration 3	777	498.87	59.81
<i>i-Ready Reading</i> 2017-18 Administration 1	971	490.79	62.33
<i>i-Ready Reading</i> 2017-18 Administration 2	1190	497.70	66.30
<i>i-Ready Reading</i> 2017-18 Administration 3	1290	511.11	69.71

The mean scale score of ELL students without WIDA tier scores, for the first administration of the 2016-17 *i-Ready* mathematics diagnostic, was 306.92 with a standard deviation of 191.94 (n=26). On the second administration, the mean scale score was 222.62 with a standard deviation of 220.06 (n=29). The third administration had a mean scale score of 483.21 with a standard deviation of 39.16 (n=29). There was an increase of 176.28 scale score points from the first administration to the third, even though, the mean scale score for the second administration was significantly lower than on the first, a drop of 84.30 scale score points.

The mean scale score of ELL students without WIDA tier scores, for the first administration of the 2017-18 *i-Ready* mathematics diagnostic, was 432.97 with a standard

deviation of 30.79 (n=255). On the second administration, the mean scale score was 439.08 with a standard deviation of 30.83 (n=461). The third administration had a mean scale score of 449.38 with a standard deviation of 33.76 (n=601). There was an increase of 16.41 scale score points from the first administration to the third, and there was not a lower mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 mathematics administration. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Table 16
Descriptive Statistics for ELL Students Without WIDA Tier Scores on the i-Ready Mathematics Diagnostic

Test Administration	N	Mean	Std. Deviation
<i>i-Ready Math 2016-17 Administration 1</i>	26	306.92	191.94
<i>i-Ready Math 2016-17 Administration 2</i>	29	222.62	220.06
<i>i-Ready Math 2016-17 Administration 3</i>	29	483.21	39.16
<i>i-Ready Math 2017-18 Administration 1</i>	255	432.97	30.79
<i>i-Ready Math 2017-18 Administration 2</i>	461	439.08	30.83
<i>i-Ready Math 2017-18 Administration 3</i>	601	449.38	33.76

The mean scale score of ELL students without WIDA tier scores, for the first administration of the 2016-17 *i-Ready* reading diagnostic, was 397.54 with a standard deviation of 182.10 (n=26). On the second administration, the mean scale score was 243.07 with a standard deviation of 243.69 (n=29). The third administration had a mean scale score of 460.50 with a

standard deviation of 75.54 (n=70). There was an increase of 62.96 scale score points from the first administration to the third, even though, the mean scale score for the second administration was significantly lower than on the first, a drop of 62.96 scale score points.

The mean scale score of ELL students without WIDA tier scores, for the first administration of the 2017-18 *i-Ready* reading diagnostic, was 462.737 with a standard deviation of 68.93 (n=259). On the second administration, the mean scale score was 466.17 with a standard deviation of 70.91 (n=474). The third administration had a mean scale score of 487.60 with a standard deviation of 77.18 (n=595). There was an increase of 24.86 scale score points from the first administration to the third, and there was not a lower mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 reading administration. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Table 17
Descriptive Statistics for All Students Without WIDA Tier Scores on the i-Ready Reading Diagnostic

Test Administration	N	Mean	Std. Deviation
<i>i-Ready Reading</i> 2016-17 Administration 1	26	397.54	182.10
<i>i-Ready Reading</i> 2016-17 Administration 2	29	243.07	243.69
<i>i-Ready Reading</i> 2016-17 Administration 3	70	460.50	75.54
<i>i-Ready Reading</i> 2017-18 Administration 1	259	462.74	68.93
<i>i-Ready Reading</i> 2017-18 Administration 2	474	466.17	70.91
<i>i-Ready Reading</i> 2017-18 Administration 3	595	487.60	77.18

The mean scale score of all the WIDA Tier A students, for the first administration of the 2016-17 *i-Ready* mathematics diagnostic, was 401.08 with a standard deviation of 77.88 (n=161). On the second administration, the mean scale score was 386.19 with a standard deviation of 128.45 (n=190). The third administration had a mean scale score of 483.37 with a standard deviation of 48.04 (n=190). There was an increase of 82.29 scale score points from the first administration to the third, even though, the mean scale score for the second administration was lower than on the first, a drop of 14.89 scale score points.

The mean scale score of all the WIDA Tier A students, for the first administration of the 2017-18 *i-Ready* mathematics diagnostic, was 444.83 with a standard deviation of 29.34 (n=203). On the second administration, the mean scale score was 450.45 with a standard deviation of 30.68 (n=204). The third administration had a mean scale score of 458.93 with a standard deviation of 32.52 (n=201). There was an increase of 14.10 scale score points from the first administration to the third, and there was not a lower mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 administration. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Furthermore, the mean scale score of all the WIDA Tier B students, for the first administration of the 2016-17 *i-Ready* mathematics diagnostic, was 413.46 with a standard deviation of 84.65 (n=164). On the second administration, the mean scale score was 391.20 with a standard deviation of 142.88 (n=176). The third administration had a mean scale score of 482.30 with a standard deviation of 48.38 (n=176). There was an increase of 68.84 scale score points from the first administration to the third, even though, the mean scale score for the second administration was lower than on the first, a drop of 22.26 scale score points.

The mean scale score of all the WIDA Tier B students, for the first administration of the 2017-18 *i-Ready* mathematics diagnostic, was 447.47 with a standard deviation of 28.56 (n=190). On the second administration, the mean scale score was 454.79 with a standard deviation of 30.08 (n=193). The third administration had a mean scale score of 464.05 with a standard deviation of 29.24 (n=193). There was an increase of 16.58 scale score points from the first administration to the third, and there was not a lower mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 administration. In

comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Additionally, the mean scale score of all the WIDA Tier C students, for the first administration of the 2016-17 *i-Ready* mathematics diagnostic, was 433.39 with a standard deviation of 58.32 (n=326). On the second administration, the mean scale score was 433.20 with a standard deviation of 89.41 (n=336). The third administration had a mean scale score of 479.68 with a standard deviation of 65.80 (n=336). There was an increase of 46.28 scale score points from the first administration to the third, even though, the mean scale score for the second administration was lower than on the first, a drop of 0.19 scale score points.

The mean scale score of all the WIDA Tier C students, for the first administration of the 2017-18 *i-Ready* mathematics diagnostic, was 456.70 with a standard deviation of 23.09 (n=321). On the second administration, the mean scale score was 464.11 with a standard deviation of 23.89 (n=314). The third administration had a mean scale score of 472.56 with a standard deviation of 25.91 (n=321). There was an increase of 15.86 scale score points from the first administration to the third, and there was not a smaller mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 administration. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Table 18

Descriptive Statistics for WIDA Tier A, B, and C Students on the i-Ready Mathematics Diagnostic

Test Administration	WIDA TIER A			WIDA TIER B			WIDA TIER C		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Math 2016-17 Administration 1	161	401.08	77.88	164	413.46	84.65	326	433.39	58.32
Math 2016-17 Administration 2	190	386.19	28.45	176	391.20	142.88	336	433.20	89.41
Math 2016-17 Administration 3	190	483.37	48.04	176	482.30	48.38	336	479.68	65.80
Math 2017-18 Administration 1	203	438.49	29.63	190	447.47	28.56	321	456.70	23.09
Math 2017-18 Administration 2	204	451.01	30.62	193	454.80	30.08	314	464.11	23.89
Math 2017-18 Administration 3	201	460.82	32.23	193	464.05	29.24	321	472.56	25.91

The mean scale score of all the WIDA Tier A students, for the first administration of the 2016-17 *i-Ready* reading diagnostic, was 411.44 with a standard deviation of 91.80 (n=161). On the second administration, the mean scale score was 393.41 with a standard deviation of 126.35 (n=190). The third administration had a mean scale score of 460.72 with a standard deviation of 64.84 (n=200). There was an increase of 49.28 scale score points from the first administration to the third, even though, the mean scale score for the second administration was lower than on the first, a drop of 18.03 scale score points.

The mean scale score of all the WIDA Tier A students, for the first administration of the 2017-18 *i-Ready* reading diagnostic, was 463.33 with a standard deviation of 65.29 (n=203). On the second administration, the mean scale score was 493.12 with a standard deviation of 65.85 (n=205). The third administration had a mean scale score of 508.39 with a standard deviation of 65.32 (n=201). There was an increase of 45.06 scale score points from the first administration to the third, and there was not a lower mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 reading administration. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

In addition, the mean scale score of all the WIDA Tier B students, for the first administration of the 2016-17 *i-Ready* reading diagnostic, was 457.76 with a standard deviation of 87.61 (n=164). On the second administration, the mean scale score was 443.14 with a standard deviation of 137.85 (n=176). The third administration had a mean scale score of 503.83 with a standard deviation of 44.65 (n=175). There was an increase of 46.07 scale score points from the first administration to the third, even though, the mean scale score for the second administration was smaller than on the first, a drop of 14.63 scale score points.

The mean scale score of all the WIDA Tier B students, for the first administration of the 2017-18 *i-Ready* reading diagnostic, was 501.57 with a standard deviation of 49.03 (n=190). On the second administration, the mean scale score was 518.12 with a standard deviation of 50.05 (n=192). The third administration had a mean scale score of 530.24 with a standard deviation of 54.65 (n=187). There was an increase of 28.67 scale score points from the first administration to the third, and there was not a lower mean scale score on the second administration when compared to the first, as it was the result on the 2016-17 reading administration. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Moreover, the mean scale score of all the WIDA Tier C students, for the first administration of the 2016-17 *i-Ready* reading diagnostic, was 495.76 with a standard deviation of 65.10 (n=326). On the second administration, the mean scale score was 499.62 with a standard deviation of 87.47 (n=336). The third administration had a mean scale score of 527.32 with a standard deviation of 40.09 (n=332). There was an increase of 31.56 scale score points from the first administration to the third. The second administration (for the 2016-17 academic year) of the *i-Ready* reading diagnostic of all the WIDA Tier C students was the only second administration whose score did not drop when compared to the first administration of the same year (i.e., including all students, all ELL students, Tier A, and Tier B).

The mean scale score of all the Tier C students, for the first administration of the 2017-18 *i-Ready* reading diagnostic, was 524.63 with a standard deviation of 39.01 (n=319). On the second administration, the mean scale score was 535.21 with a standard deviation of 38.89 (n=319). The third administration had a mean scale score of 546.81 with a standard deviation of 41.49 (n=307). There was an increase of 22.19 scale score points from the first administration to

the third. In comparison to the 2016-17 administrations, the standard deviation from the 2017-18 academic years were smaller and more consistent.

Table 19

Descriptive Statistics for WIDA Tier A, B, and C Students on the i-Ready Reading Diagnostic

Test Administration	WIDA TIER A			WIDA TIER B			WIDA TIER C		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Reading 2016-17 Administration 1	161	411.44	91.80	164	457.76	87.61	326	495.76	65.10
Reading 2016-17 Administration 2	190	393.41	126.35	176	443.14	137.85	336	499.62	87.47
Reading 2016-17 Administration 3	200	460.72	64.84	175	503.83	44.65	332	527.32	40.09
Reading 2017-18 Administration 1	203	463.33	65.29	190	501.57	49.02	319	524.63	39.01
Reading 2017-18 Administration 2	205	493.12	65.85	192	518.12	50.05	319	535.21	38.89
Reading 2017-18 Administration 3	201	508.39	65.32	187	530.24	54.65	307	546.81	41.49

Figure 1 highlights all six administrations (i.e., 2016-17 and 2017-18) of the *i-Ready* mathematics diagnostic. ELL students without WIDA tier scores started with a lower mean scale score on the first and second administration of the 2016-17 mathematics *i-Ready* diagnostic. Conversely, on the third administration, ELL students without WIDA tier scores were able to surpass WIDA Tier B, by 0.91 scale score points, WIDA Tier C by 3.53 points, and all ELL students by 1.80 points. In addition, WIDA Tier A students ended the third 2016-17 administration with the highest mean scale score, 483.37, which was higher than ELL students without WIDA tier scores by 0.16 points. On the other hand, during the three administrations of the 2017-18 academic year, WIDA Tier C students (i.e., ELL students with the highest English language acquisition) were able to outperform all other subgroups in all three administrations. Even though WIDA Tier A students were not able to close the gap with the other tier groups, WIDA Tier A students gains from administration to administration were higher than WIDA Tier B by 13 scale score points, and WIDA Tier C by 36 scale score points on the 2016-17 *i-Ready* diagnostic. Moreover, on the 2017-18 administrations, WIDA Tier A student gains were higher than WIDA Tier B by 5 scale score points, and WIDA Tier C by 6 scale score points.

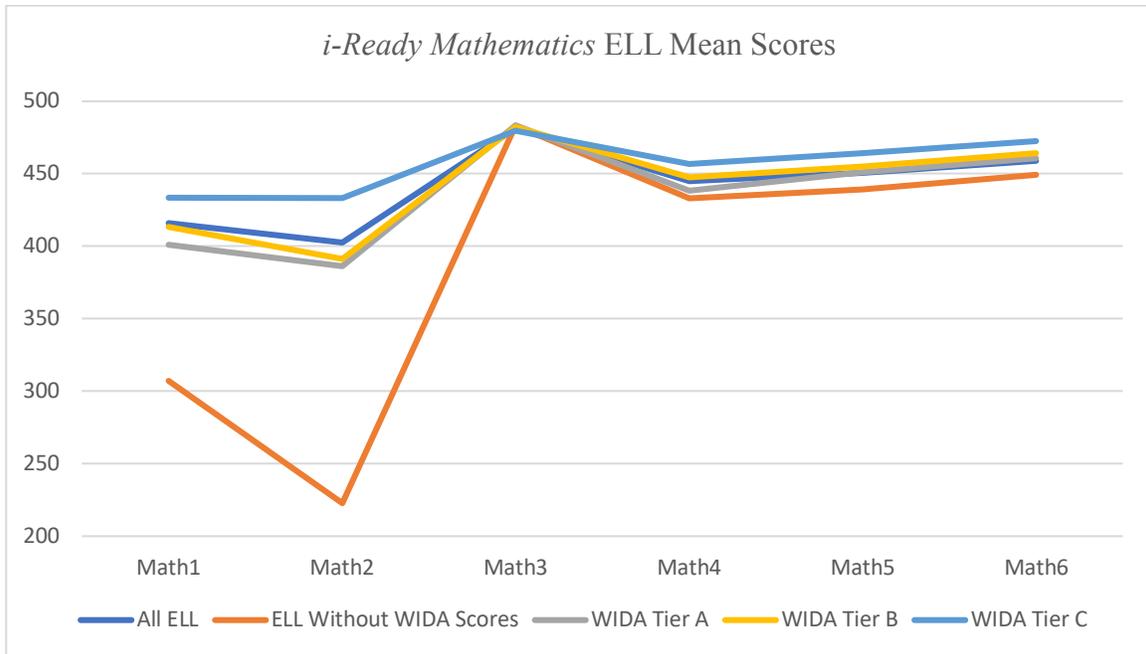


Figure 1: *i-Ready* mathematics ELL mean scores

Figure 2 displays all six administrations (i.e., 2016-17 and 2017-18) of the *i-Ready* reading diagnostic. In contrast with the mathematics *i-Ready* diagnostic, ELL students without WIDA tier scores and WIDA Tier A students are unable to close the gap with WIDA Tier B and WIDA Tier C students on the 2016-17 administrations. On the 2017-18 administrations, as with the *i-Ready* mathematics diagnostic, WIDA Tier C students outperform all other subgroups in all three administrations. Even though WIDA Tier A students were not able to close the gap with the other tier groups, WIDA Tier A student gains from administration to administration were higher than WIDA Tier B by 3 scale score points, and WIDA Tier C by 17 points on the 2016-17 *i-Ready* reading diagnostic. Furthermore, on the 2017-18 administrations, WIDA Tier A student gains were higher than WIDA Tier B by 16 points, and WIDA Tier C by 23 points.

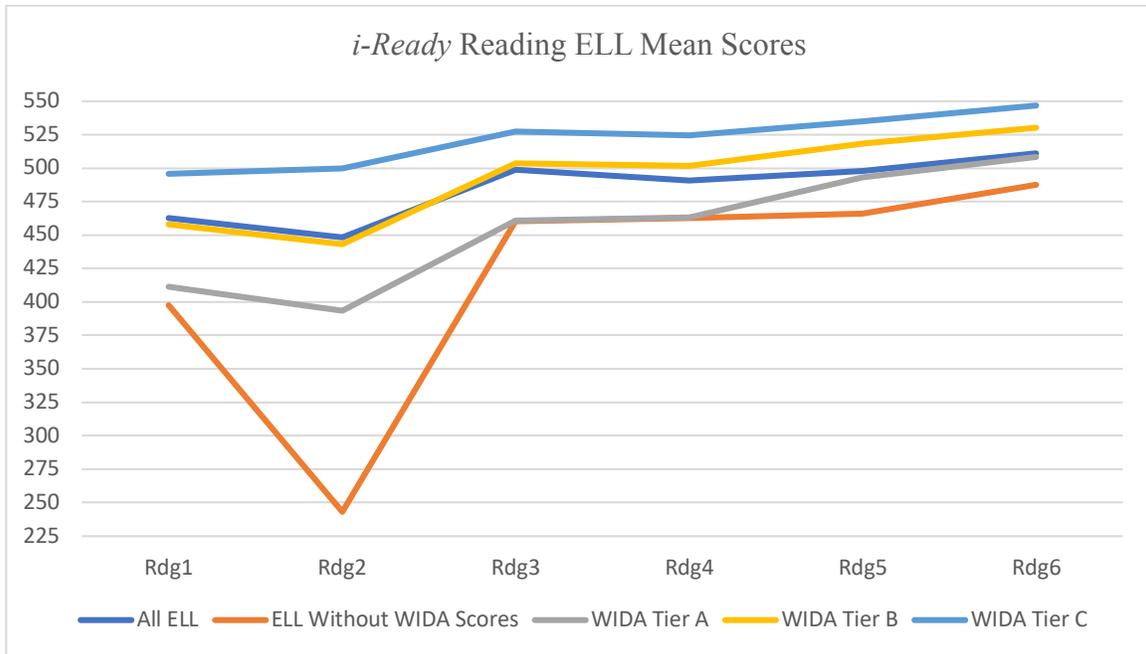


Figure 2: *i-Ready* reading ELL mean scores

ANOVA Results for Research Question 2

In what ways and to what extent does the academic growth of ELL students differ from non-ELL students during the first two years of participating in an ELL program?

A factorial two-way ANOVA was conducted to investigate the main effects of ELL status and the interaction effects between (1) ELL status and SES status, and (2) ELL status and ESE status on gain scores from the *i-Ready* mathematics diagnostic. The difference in mathematics performance growth associated with ELL status, the main effect, was statistically significant at the .05 significance level; ELL status yielded an F ratio of $F(1, 7134) = 6.30$, $p < .012$. Interaction effects (i.e., ELL and SES, ELL and ESE) were statistically non-significant.

Table 20

Tests of Between-Subjects Effects i-Ready Mathematics Gain Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	91977.87 ^a	7	13139.70	3.53	.001	.003
Intercept	2217636.18	1	2217636.18	596.30	.000	.077
ELL	23414.75	1	23414.75	6.30	.012	.001
ESE	24.53	1	24.53	.01	.935	.000
SES	1609.35	1	1609.35	.43	.511	.000
ELL * ESE	3727.01	1	3727.01	1.00	.317	.000
ELL * SES	2759.71	1	2759.71	.74	.389	.000
ESE * SES	3181.52	1	3181.52	.86	.355	.000
ELL * ESE * SES	8795.11	1	8795.11	2.37	.124	.000
Error	26531451.72	7134	3719.02			
Total	37312781.00	7142				
Corrected Total	26623429.58	7141				

a. R Squared = .003 (Adjusted R Squared = .002)

The mean gain score (i.e., dependent variable) for mathematics performance for ELL students (i.e., independent variable) was 47.67 (i.e., ELL status is the main effect of the study; the ANOVA suggested it was statistically significant at the .05 significance level). In addition, the mean gain score for non-ELL students was 38.79. Overall, ELL students had a higher mean gain score by 8.88 points.

Table 21
Main Effects for Mathematics

ELL Variable	Mean
ELL	47.67
Non-ELL	38.79

As noted earlier, the study design used the full population of students rather than a sample, and measures of statistical significance (i.e., the ANOVA determined SES not to be statistically significant at the 0.5 significance level) are treated as a marker for practical significance (Bickel, 2007). The estimated marginal means for the interaction effects are thus reported, but with the caveat that the practical significance of observed differences is limited.

The mean gain score for mathematics performance for high-SES ELL students (i.e., students that did not qualify for free/reduced lunch) is 50.36, while the mean gain score for low-SES ELL students (students that qualify for free/reduced lunch) is 44.98. For high-SES non-ELL students, the mean gain score is 38.43, while the mean gain score for low-SES non-ELL students is 39.15. Figure 3 demonstrates that the mean gain score for high-SES ELL students is higher than for low-SES ELL students. Conversely, the mean gain score for low-SES non-ELL students is higher than for high-SES non-ELL students.

Table 22
ELL Status X SES Interactions for Mathematics

ELL Variable		Mean
ELL	High SES	50.36
	Low SES	44.98
Non-ELL	High SES	38.43
	Low SES	39.15

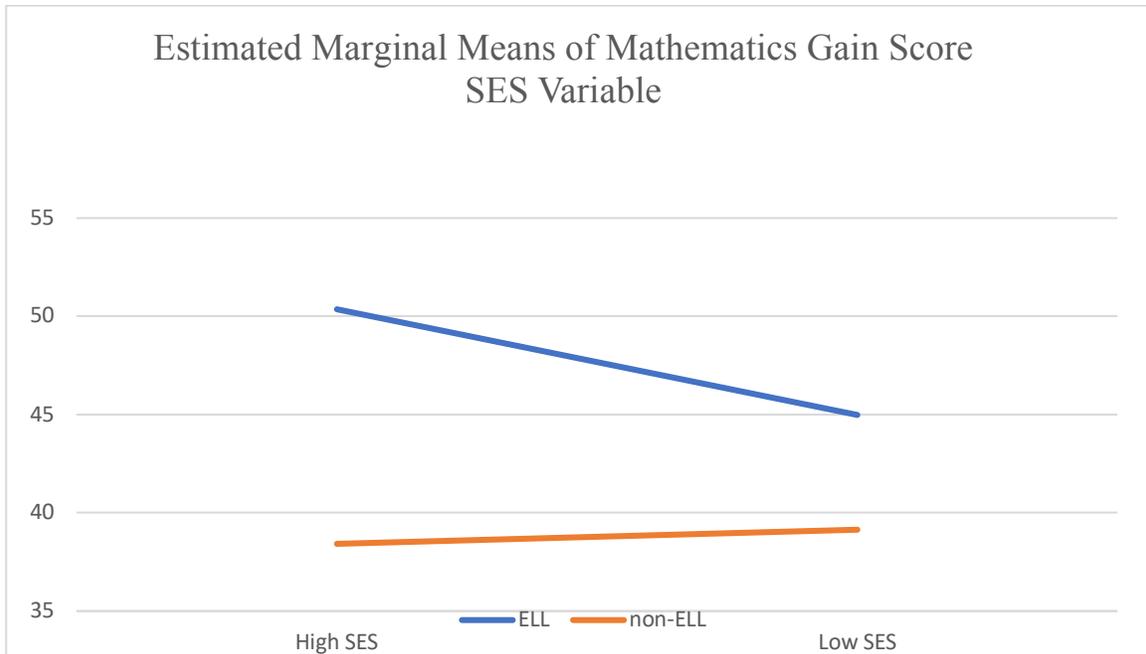


Figure 3: Estimated marginal means of mathematics gain score SES variable

The mean gain score for mathematics performance for non-ESE ELL students is 49.59, while the mean gain score for ESE ELL students is 45.76. Moreover, the mean gain score for non-ESE non-ELL students is 37.16, while the mean gain score for ESE non-ELL students is 40.42. Figure 4 demonstrates that the mean gain score is higher for non-ESE ELL students than for ESE ELL students. In contrast, the mean gain score for ESE non-ELL students is higher than for non-ESE non-ELL students.

Table 23
ELL Status X ESE Interactions for Mathematics

ELL Variable		Mean
ELL	non-ESE	49.59
	ESE	45.76
Non-ELL	non-ESE	37.16
	ESE	40.42

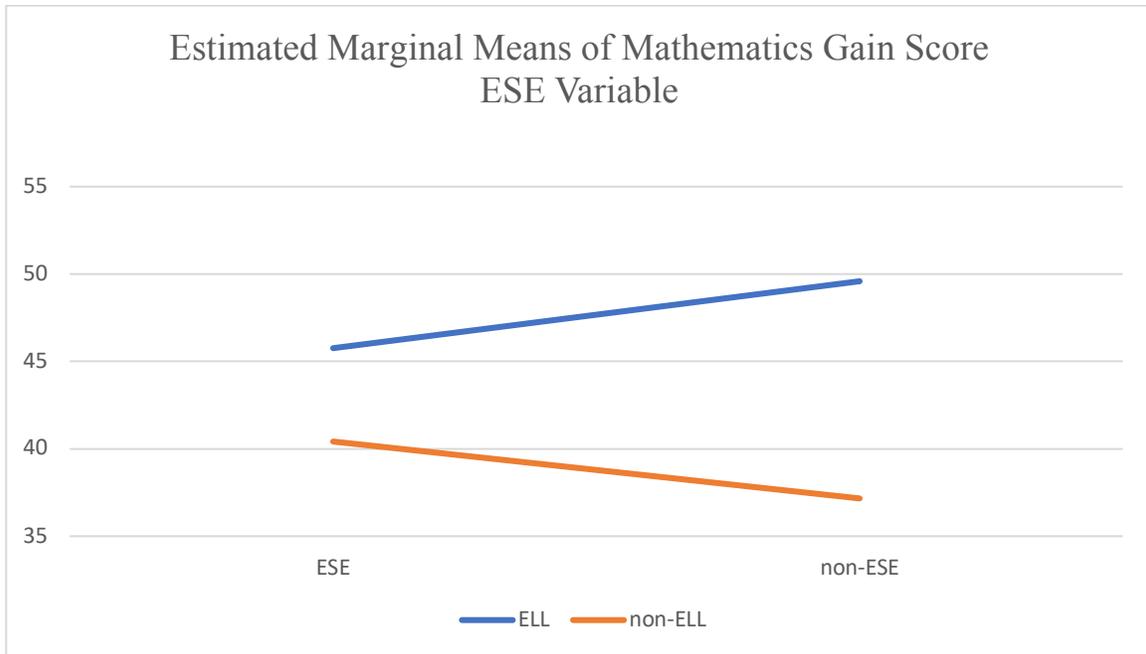


Figure 4: Estimated marginal means of mathematics gain score ESE variable

A second factorial two-way ANOVA was conducted to investigate the main effects of ELL status and the interaction effects between (1) ELL status and SES status, and (2) ELL status and ESE status on gain scores from the *i-Ready* reading diagnostic. The difference in reading performance growth associated with ELL status (i.e., the main effect) was statistically significant at the .05 significance level; ELL status yielded an F ratio of $F(1, 7386) = 20.13, p < .000$. The interaction effects of ELL and ESE were statistically significant at the 0.5 level; ESE status yielded an F ratio of $F(1, 7386) = 5.43, p < .020$. The interaction effects of ELL and SES were statistically non-significant.

Table 24

Tests of Between-Subjects Effects i-Ready Reading Gain Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	495274.85 ^a	7	70753.55	14.17	.000	.013
Intercept	3777417.50	1	3777417.50	756.23	.000	.093
ELL	100552.64	1	100552.64	20.13	.000	.003
ESE	2289.34	1	2289.34	.46	.498	.000
SES	29.64	1	29.64	.01	.939	.000
ELL * ESE	27110.12	1	27110.12	5.43	.020	.001
ELL * SES	1380.67	1	1380.67	.28	.599	.000
ESE * SES	95.53	1	95.53	.02	.890	.000
ELL * ESE * SES	188.55	1	188.55	.04	.846	.000
Error	36893407.18	7386	4995.05			
Total	52471443.00	7394				
Corrected Total	37388682.03	7393				

a. R Squared = .013 (Adjusted R Squared = .012)

The mean gain score (i.e., dependent variable) for the reading performance for ELL students (i.e., independent variable) was 66.15 (i.e., ELL status is the main effect of the study; the ANOVA suggested it was statistically significant at the .05 significance level). Moreover, the mean gain score for non-ELL students was 47.59. Overall, ELL students had a higher mean gain score by 18.56 points.

Table 25
Main Effects for Reading

ELL Variable	Mean
ELL	66.15
Non-ELL	47.59

As noted with the factorial ANOVA conducted for mathematics, the study utilized the full population of students, so statistical significance will be treated as a marker for practical significance (i.e., the ANOVA determined SES not to be statistically significant at the 0.5 significance level) (Bickel, 2007). In addition, the mean gain score for the reading performance for high-SES ELL students is 67.08, while the mean gain score for low-SES ELL students is 65.22. For high-SES non-ELL students, the mean gain score is 46.35, while the mean gain score for low-SES non-ELL students is 48.84. Figure 5 demonstrates that the mean gain score is higher for high-SES ELL students, and lower for low-SES ELL students. Conversely, the mean gain score is higher for low-SES non-ELL students than for high-SES non-ELL students.

Table 26
ELL Status X SES Interactions for Reading

ELL Variable		Mean
ELL	High SES	67.08
	Low SES	65.22
Non-ELL	High SES	46.35
	Low SES	48.84

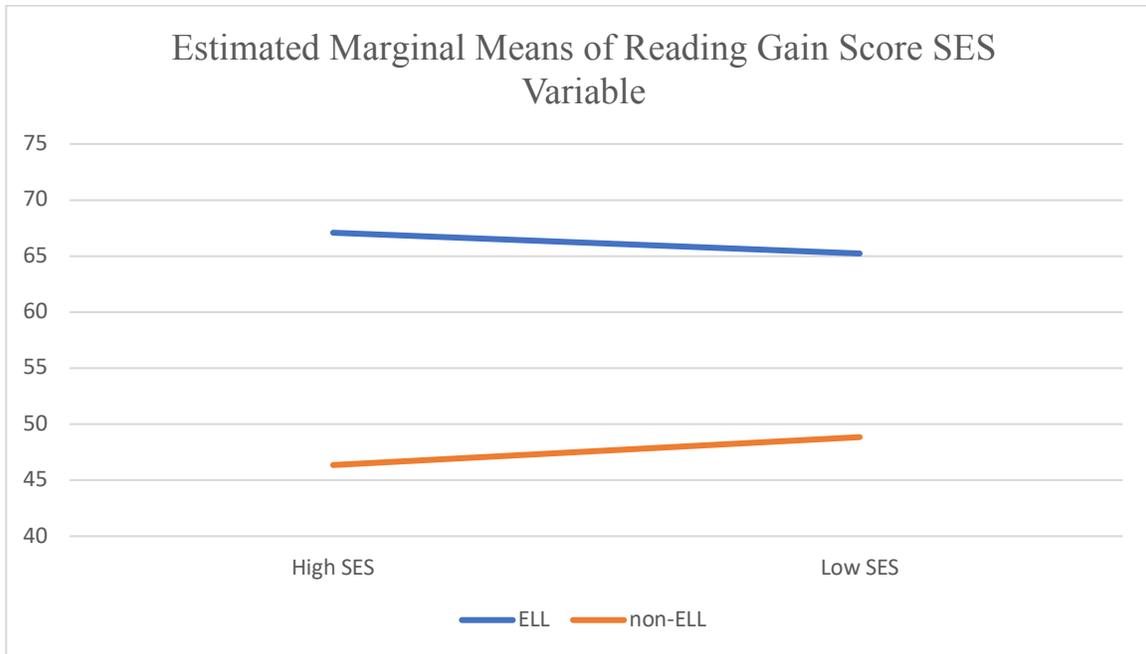


Figure 5: Estimated marginal means of reading gain score SES variable

The mean gain score for the reading performance for non-ESE ELL students is 69.57, while the mean gain score for ESE-ELL students is 62.73. For non-ESE non-ELL students, the mean gain score is 41.38, while the mean gain score for ESE non-ELL students is 53.81. Figure 6 demonstrates that the mean gain score for non-ESE ELL students is higher than for ESE ELL students. On the other hand, the mean gain score for ESE non-ELL students is higher than for non-ESE non-ELL students.

Table 27
Status X ESE Interactions for Reading

ELL Variable		Mean
ELL	non-ESE	69.57
	ESE	62.73
Non-ELL	non-ESE	41.38
	ESE	53.81

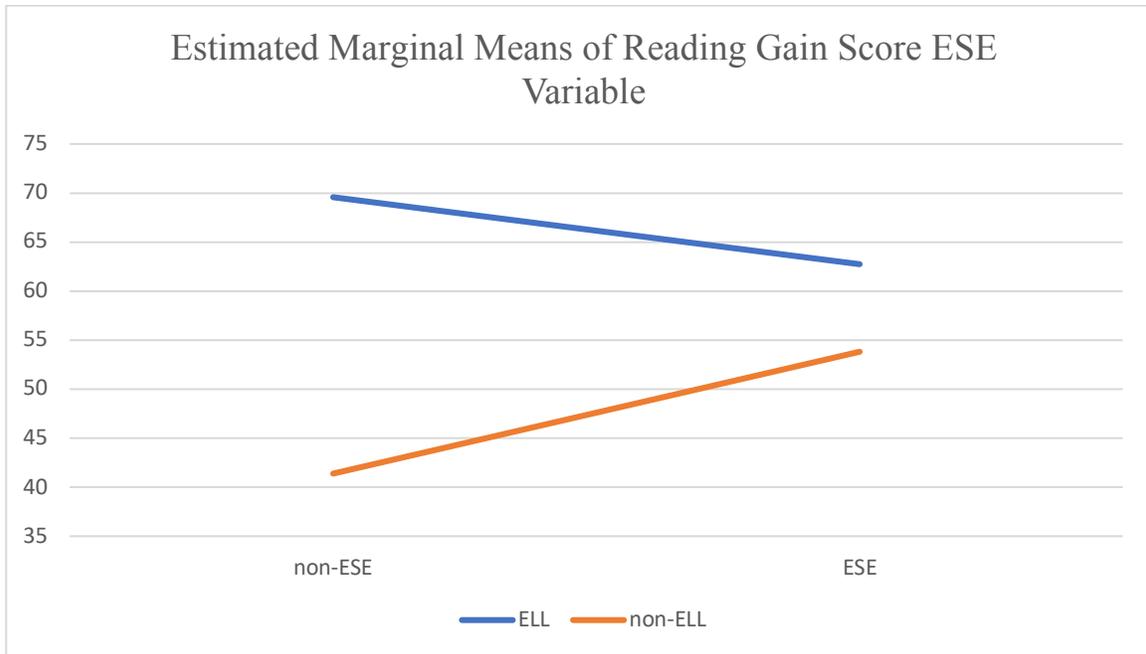


Figure 6: Estimated marginal means of reading gain score ESE variable

Descriptive Statistics for Research Question 3

To what extent does the academic growth trajectory of ELL students support or call into question policies related to standardized testing?

Since the results of the ANOVA demonstrated that ELL students were making greater gains in both mathematics and reading, an ancillary analysis was conducted. Figure 7 illustrates that non-ELL students surpassed ELL students in the hypothetical additional year in mathematics with a mean scale score projection of 510.88 (see table 28). Furthermore, the mathematics gains scores indicate that non-ELL students have higher gains (42.99) than ELL students (42.91) (see table 29).

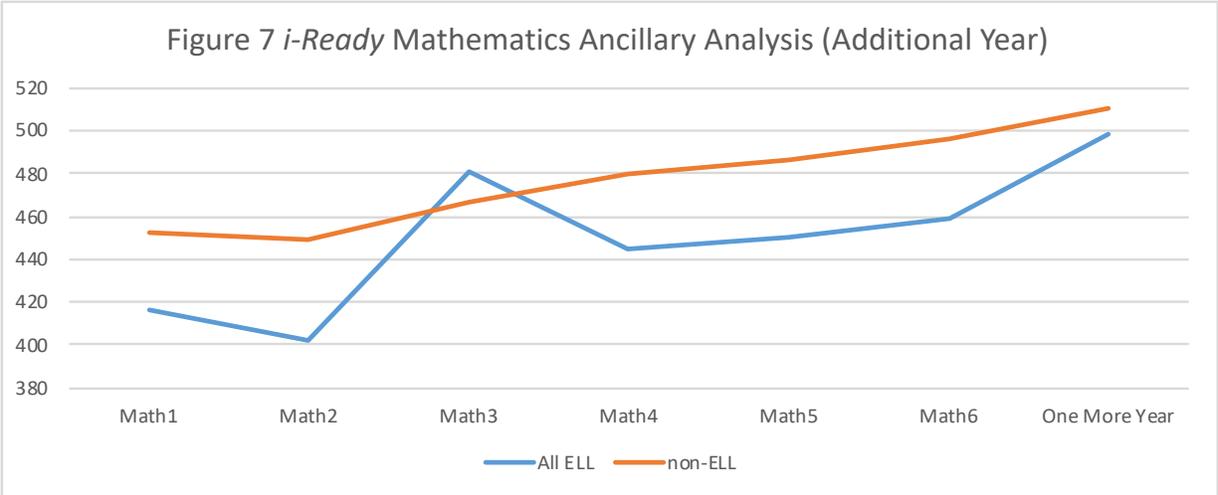


Figure 7: *i-Ready* mathematics ancillary analysis (additional year)

Table 28

Descriptive Statistics for ELL and non-ELL Students in the i-Ready Mathematics Diagnostic with the Additional Year

Categories	Math 1	Math 2	Math 3	Math 4	Math 5	Math 6	Additional Year
All ELL	416.02	402.52	481.41	444.83	450.46	458.93	498.68
non-ELL	452.85	448.86	466.66	479.58	486.87	495.85	510.88

Table 29

Mathematics Gain Scores for ELL and non-ELL Students

Categories	Mathematics Gain Scores
All ELL	42.91
All non-ELL	42.99

Figure 8 illustrates the hypothetical analysis of the additional year and it shows that non-ELL students score higher than ELL students in the *i-Ready* reading diagnostic with a mean scale score projection of 620.86 (see table 30). Additionally, non-ELL students have higher reading gain scores (51.89) than ELL students (48.38) (see table 31).

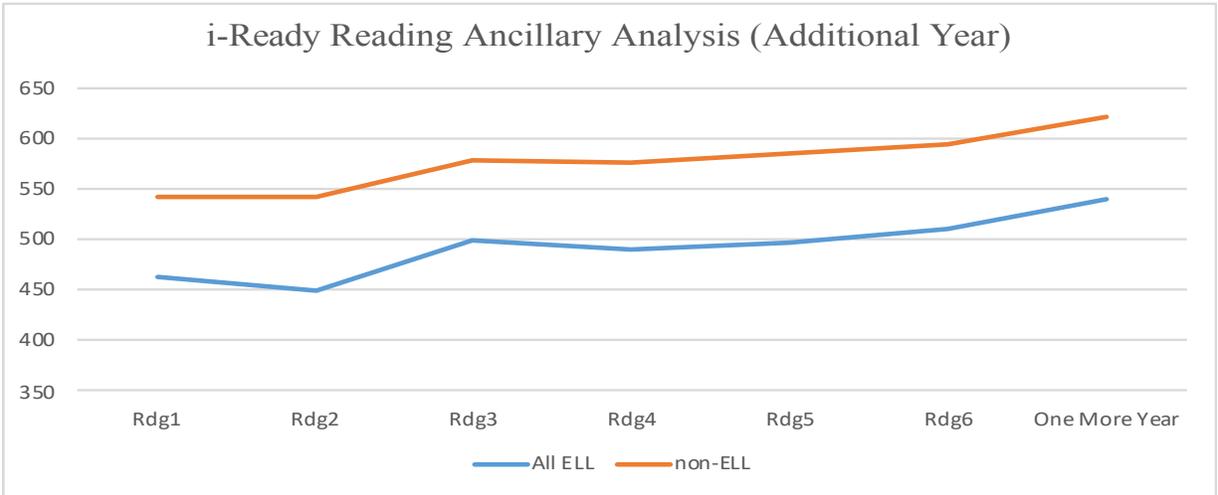


Figure 8: *i-Ready* reading ancillary analysis (additional year)

Table 30

Descriptive Statistics for ELL and non-ELL Students in the i-Ready Reading Diagnostic with the Additional Year

Categories	Rdg1	Rdg2	Rdg3	Rdg4	Rdg5	Rdg6	Additional Year
All ELL	462.73	448.24	498.87	490.79	497.70	511.11	539.34
non-ELL	541.63	540.91	578.72	575.94	584.71	593.53	620.86

Table 31

Reading Gain Scores for ELL and non-ELL Students

Categories	Reading Gain Scores
All ELL	48.38
All non-ELL	51.89

Summary

The chapter reported the results of ELL and non-ELL students in grades sixth, seventh, and eighth in six administrations of the *i-Ready* mathematics and reading diagnostic for the 2016-17 and 2017-18 academic years (i.e., the data reported for ELL students were disaggregated by WIDA tiers: A, B, or C). The results indicated that the standard deviations from

the 2017-18 administrations were smaller and more consistent than on the 2016-17 administrations, for all subgroups. In addition, the second administration of the *i-Ready* diagnostic for the 2016-17 academic year was lower than the first for all subgroups in mathematics, and for all subgroups in reading except for WIDA Tier C. Once the data were disaggregated, WIDA Tier A students (i.e., ELL students with the lowest English acquisition level) made higher gains than the other tiers (WIDA Tier B and WIDA Tier C) in all administrations, and in both subject areas.

In terms of mathematics performance, the results of the ANOVA suggest that gains made by ELL students were significantly larger than gains made by non-ELL students (i.e., main effects); non-significant results for the interaction effects (i.e., ELL and SES, ELL and ESE) suggest that the relationship between ELL status and performance is not mediated by SES or ESE status. In terms of reading performance, the results of the ANOVA suggest that gains made by ELL students were significantly larger than gains made by non-ELL students; non-significant results for the interaction effects of ELL and SES suggest that the relationship between ELL status and performance is not mediated by SES. On the other hand, the significant results for the interaction effects of ELL and ESE suggest that the relationship between ELL status and performance is mediated by ESE. While statistically non-significant, and thus of limited practical significance, the estimated marginal means obtained from the ANOVA interactions indicated that high-SES ELL students had a higher mean gain score than high-SES non-ELL students, while low-SES non-ELL students had a higher mean gain score in both mathematics and reading.

The ancillary analysis conducted (i.e., the calculation of a hypothetical additional year of scores, based upon average yearly changes in the actual scores) resulted in non-ELL students outperforming ELL students in mathematics and reading with higher mean scale score

projections. As a result, ELL students were not predicted to substantially close the gap with non-ELL students.

CHAPTER FIVE: CONCLUSION

Introduction

The previous chapter reported the results of the study. This chapter contains the (1) summary of the study, (2) discussion of the findings, (3) implications for practice, and (4) recommendations for further research.

Summary of the Study

The Every Student Succeeds Act of 2015 (ESSA), established an English language learner (ELL) accountability mark that is inconsistent with second language acquisition research. The research states that it takes, on average, an ELL student longer than two years, and up to seven years to acquire academic language proficiency (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016). If ELL students are assessed by state standardized assessments (e.g., FSA) before they become English language proficient, then these standardized assessments are capturing English proficiency differences in addition to content knowledge differences among ELL students. Therefore, the information collected during any standardized assessment, that is not designed to measure English language acquisition, is rendered invalid (Butler & Stevens, 2001, p. 411).

The purpose of the study was to investigate, in a school district with a significant amount of ELL students, how the academic performance of ELL students in middle school in grades sixth, seventh, and eighth improved during a period of two years (i.e., when ELL student scores become part of the state accountability formulas after two years) utilizing the *i-Ready* diagnostic assessment in both mathematics and reading from the 2016-17 and 2017-18 academic years (i.e., six mathematics assessments and six reading assessments). Furthermore, the study compared the academic growth of ELL and non-ELL students during the same two-year period, as well as it

conducted an ancillary analysis to determine the scores of ELL and non-ELL students during an additional hypothetical year.

In order to investigate the policy, the two-year accountability mark established by ESSA, the study utilized critical policy analysis, as a lens, to examine the appropriateness of the federal law. According to Codd (1988), critical policy analysis “is a form of enquiry which provides either the informational base upon which policy is constructed, or the critical examination of existing policies” (p. 235).

The study included three research questions:

1. In what ways and to what extent does the performance of ELL students improve during the first two years of participating in an ELL program?
2. In what ways and to what extent does the academic growth of ELL students differ from non-ELL students during the first two years of participating in an ELL program?
3. To what extent does the academic growth trajectory of ELL students support or call into question policies related to standardized testing?

The first Research Question was answered using descriptive statistics from the *i-Ready* diagnostic data in mathematics and reading. The data included the number of participants, mean scores, and standard deviations for the different ELL subgroups (i.e., ELL, ELL without WIDA tier scores, WIDA Tier A, WIDA Tier B, and WIDA Tier C) in each administration. In addition to using visual analysis to highlight the changes in mean scores, plotted on a graph, for the different ELL subgroups, between each of the twelve assessments, six for mathematics and six for reading.

The second Research Question was answered utilizing an ANOVA. The ANOVA used gain scores from both *i-Ready* diagnostics to investigate the main effects of ELL status, and the

interaction effects between (1) ELL status and SES status, and (2) ELL status and ESE status on gain scores. Moreover, visual analysis was used to display, plotted on a graph, the differences in mean scores for both interaction effects.

To answer the third Research Question, the difference, in mean scale scores, between the first and third administration of the 2016-17 academic year, and the difference, in mean scale scores, between the first and third administration of the 2017-18 academic year were calculated. Then, the results were averaged, and added to the third administration of the 2017-18 academic year to calculate the hypothetical additional year. The process was used to calculate the hypothetical additional year for both mathematics and reading. Afterwards, all six administrations for mathematics and reading were plotted on a graph including the hypothetical additional year. The differences were highlighted using visual analysis.

Discussion of the Findings

Research Question 1

In what ways and to what extent does the performance of ELL students improve during the first two years of participating in an ELL program?

The results for Research Question 1 indicated that WIDA Tier C students (i.e., ELL students with the highest English language acquisition) outperformed the other ELL subgroups (i.e., WIDA Tier A, WIDA Tier B, and ELL students without WIDA tier scores) at the end of the two-year mark, in all, but one (i.e., the third administration of the *i-Ready* 2016-17 mathematics diagnostic) of the *i-Ready* mathematics diagnostics, and in all of the *i-Ready* reading diagnostics. In terms of mathematics performance, WIDA Tier C students outperformed WIDA Tier A students by an average of 24.48 mean scale score points in five of the six mathematics *i-Ready* diagnostic assessments (i.e., WIDA Tier A students outperformed WIDA Tier C students in the

third administration of the 2016-17 academic year by 3.69 mean scale score points).

Additionally, in terms of reading performance, WIDA Tier C students outperformed WIDA Tier A students by an average of 66.49 mean scale score points in all the reading *i-Ready* diagnostic assessments.

The findings reported for Research Question 1 align with the findings from the extant literature that described comprehension of grade level text as essential to the development of academic language proficiency in ELL students (Gersten et al., 2007, p. 23), or “the ability to understand and command the specialized language” of each subject area (e.g., mathematics and reading) (Neal, 2015, p. 12). In addition, the extant literature explains that to increase comprehension, and to be able to have access to these grade level text, ELL students must be exposed to the academic language found in them (Collier 1995; Carhill et al., 2008; Carrier, 2005; International Literacy Association, 2017). Thus, as Carhill et al. (2008) indicate, ELL students without the sufficient academic English proficiency will have lower scores on standardized tests (p. 1156).

Moreover, the findings reported for Research Question 1 showed that WIDA Tier C students had higher mean scale scores than the other subgroups because they are closer to acquiring academic language proficiency, which provides them an advantage when taking standardized tests such as the *i-Ready* diagnostic. Even though, WIDA Tier C students have not become English language proficient, in comparison to their non-ELL peers, their higher level of comprehension, in English, facilitates their access to the grade level text found in the *i-Ready* mathematics and reading diagnostics. Hence, the differences in mean scale scores, albeit apparent, in both subjects are more pronounced in the reading *i-Ready* diagnostics because WIDA Tier C students have a higher level of comprehension.

The findings reported for Research Question 1 help extend the body of literature by concentrating in students in middle school grades, sixth, seventh, and eighth, since most of the research on second language acquisition has focused on students in elementary grades (Bumgarner & Lin, 2014). This is important because middle school students are exposed to more complex texts, while having a shorter time frame to develop academic language before they are assessed by state standardized tests (i.e., in the state of Florida FSA testing begins in the 3rd grade) (Carhill et al., 2008, p. 1156).

Research Question 2

In what ways and to what extent does the academic growth of ELL students differ from non-ELL students during the first two years of participating in an ELL program?

The results of the ANOVA indicated that differences in student performance growth were significantly related to ELL status. The mean gain score (i.e., dependent variable) for ELL students (i.e., independent variable) was 8.88 points higher in mathematics and 18.56 points higher in reading. In addition, the ANOVA results indicated that the interaction between SES and ELL status was not significant in either of the *i-Ready* diagnostics, mathematics and reading, but that the interaction between ESE and ELL was significant for mathematics (i.e., the influence of ELL status on mathematics performance is moderated by SES status). As noted in chapter four, statistical significance is treated here as a marker for practical significance, since the study used the entire population (Bickel, 2007).

High-SES ELL students had a higher mean gain score by 11.93 points in mathematics and 20.73 in reading than high-SES non-ELL students, and low-SES ELL students had a higher mean gain score by 5.83 mean gain score points in mathematics and 16.38 mean gain score points in reading than low-SES non-ELL students. Similarly, non-ESE ELL students had a

higher mean gain score by 12.43 mean gain score points in mathematics and 28.19 mean gain score points in reading than non-ESE non-ELL students, and ESE ELL students had a higher mean gain score by 5.34 mean gain score points in mathematics and 8.92 mean gain score points in reading than ESE non-ELL students. The results show that ELL students are making progress, in mathematics and reading, at a faster rate than non-ELL students, but the gap does not close within the two-year window dictated by ESSA.

The findings reported for Research Question 2 align with the findings from the extant literature in that the extant literature affirms that two years is not enough time for an ELL student to attain academic language proficiency (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016). Collier (1995) states that ELL students need four to twelve years of second language development to reach a comparable level of academic proficiency to compete with non-ELL students (p. 11). The findings reported for Research Question 2 support Collier's (1995) findings in that ELL students, while having higher mean gain scores, are not able to perform at or above the same level as non-ELL students. Furthermore, Carhill et al. (2008) reports that only 25.2 percent of the ELL students were within one standard deviation of their non-ELL peers and only 7.4 percent of the study's ELL sample were able to acquire English language proficiency after seven years (p. 1165).

Additionally, MacSwan and Pray (2008) found that 68.5 percent of ELL students, in the sample, were able to achieve English language proficiency after four years, and that 92.13 percent of ELL students were able to do so after five years (p. 667). In their study, Kieffer and Parker (2016) reported that after six years, the students in the study were able to become reclassified or exited from an ESOL program due to achieving English language proficiency (p.

5). Hakuta (2011) supports previous findings by concluding that it may take four to seven years for 80 percent of ELL students to attain academic language proficiency (p. 167).

Regarding the effects of SES status, Han et al. (2014) explains that a significant amount of the ELL student population come from households with parents that are not highly literate, have low-income, and where English is not spoken (p. 841). As a result, ELL students attend early childhood education (i.e., any schooling public or private prior to Kindergarten) at a lower rate than their non-ELL peers, which has long time effects in their education (Bumgarner & Lin, 2014, p. 526). The findings reported for Research Question 2 support Bumgarner and Lin (2014) in that low-SES ELL students mean gain scores were lower in mathematics by 5.38 mean gain score points, and 1.86 mean gain score points in reading when compared to high-SES ELL students.

Moreover, as reported in the results for Research Question 2, non-ESE ELL students had higher mean gain scores in both mathematics and reading. The mean gain score of non-ESE ELL students was higher by 3.83 points in mathematics, and 6.84 points in reading when compared to ESE ELL students. The findings indicate that the ESE ELL student's cognitive disability hampers his or her learning on his or her native language, which affects the acquisition of the second language (i.e., English). Currently, there is a dearth in the literature of the performance of students that are both ESE and ELL in mathematics and reading. There is extensive research about the overidentification of ELLs in ESE programs due to inadequate evaluation assessments (Department of Health, Education, and Welfare, 1970; Improving America's Schools Act, 1994, p. 199), but the development of students that are both ESE and ELL in the K-12 setting has not been studied with the same emphasis.

In addition to time, there are other variables that have an effect on the rate of second language acquisition such as: age of exposure, the level of parental education, SES status, ESE status, and formal schooling in the ELL student's native language (Collier, 1995; Carhill et al., 2008; Hammer et al., 2008; MacSwan & Pray, 2010, Bumgarner & Lin, 2014; Kieffer & Parker 2016). The findings reported for Research Question 2 provide support for the extant literature by determining that two years is not enough time for an ELL student to attain academic language proficiency (Collier, 1995; MacSwan & Pray, 2005; Hakuta, 2011; Kieffer & Park, 2016) and by identifying SES as key factor in language acquisition. Furthermore, the findings extend the extant literature by filling a gap in the understanding of the performance of students that are both ESE and ELL, and by focusing in middle school students (Bumgarner & Lin, 2014).

Research Question 3

To what extent does the academic growth trajectory of ELL students support or call into question policies related to standardized testing?

After the results of the ANOVA indicated that ELL students were making greater gains in both subjects, mathematics and reading, an ancillary analysis was conducted. The ancillary analysis showed that non-ELL students had a higher mean scale score projection in both subject's mathematics and reading. The non-ELL students outperformed ELL students by 12.2 mean scale score projection points in mathematics, and by 81.52 mean scale score projection points in reading. It is clear that the academic language proficiency of non-ELL students (Collier 1995; Carhill et al., 2008; Carrier, 2005; International Literacy Association, 2017) gives them an advantage in both *i-Ready* diagnostics, but the advantage is more significant in reading because of the level of academic language acquired. Thus, the results of the ancillary analysis can be interpreted to indicate that it is unlikely that one additional year would make a difference.

In the Elementary and Secondary Education Amendments of 1967, the U.S. Congress recognized ELL student education as “one of the most acute educational problems in the United States” (Elementary and Secondary Education Amendments, 1967, p. 816). It added, for the first time, a Bilingual Education Act with the purpose of providing the necessary funds to assist in the development of programs that would help ELL students across the U.S. Since then, the three branches of the federal government have contributed to the expansion and protection of the rights of ELL students. Yet, ESSA, established a two-year ELL accountability mark that is not supported by second language acquisition research. In doing so, it has created an ELL education policy that threatens to negatively impact an estimated 9.1% of the public-school population in the United States (Carroll & Bailey, 2016, p. 24).

The findings reported for Research Question 3 do not support the two-year time frame, and it exposes the significant differences in the performance of ELL students when compared to their non-ELL peers in mathematics and reading. Butler and Stevens (2001) state that because ELL students have not acquired academic language proficiency, they are not able to adequately participate in standardized assessments, and any information obtained would be invalidated (p. 411). If ELL students are not academic language proficient when taking a standardized test designed to measure content knowledge, then these assessments may be capturing English proficiency differences, in addition to content knowledge differences among ELL students.

Prior to ESSA, NCLB had established a one-year ELL accountability mark. The then Governor of the state of Florida, Rick Scott, and the former Commissioner of Education, Pam Stewart, wrote a letter (Rick Scott, 2014) to the former U.S. Secretary of Education, Arne Duncan, asking to extend the time-frame. The state of Florida argued that the time-frame was not adequate, and that more time was needed for ELL students to develop. Moreover, the

superintendent of the Miami-Dade School District, Alberto Carvalho, was in favor of extending the time-frame because it helped improve language proficiency, by 28 percent, when giving ELL students an additional year (Jordan, 2014).

The findings reported for Research Question 3 support second language acquisition research by highlighting the performance of ELL students in comparison to their non-ELL peers. The results of the ancillary analysis are glaring, in that it showcases the vast difference on the performance of ELL and non-ELL students, and how the two-year ELL accountability mark has the potential to impact their scores in standardized assessments.

Implications for Practice

The results indicated that WIDA Tier A students (i.e., ELL students with the lowest English language acquisition) are making progress in mathematics and reading at a faster rate than ELL students with higher levels of English language acquisition. These WIDA Tier A ELL students are nearly closing the gap with their WIDA Tier B and WIDA Tier C counterparts within the two-year period of investigation. WIDA Tier A students receive the most intense level of supports (i.e., enrollment in a developmental English class and small group interventions), but these supports and/or interventions are taken away, as the ELL student achieves a higher level of English language acquisition, according to WIDA (e.g., the WIDA Tier A student, now becomes a WIDA Tier B, and then a WIDA Tier C student). At that point, these ELL students, WIDA Tier C, become mainstream and are participating in traditional core content and/or elective classes. The results suggest that these supports may need to continue because WIDA Tier B and WIDA Tier C students' performance plateau during the two-year time period. Thus, while ELL students might be performing at a higher level, the supports and/or interventions that were used might need to be extended until the student achieves English language proficiency.

Collier (1995) explains that ELL students taught in a bilingual education program are able to become proficient in their native language, while developing the necessary academic knowledge to reach academic proficiency in the secondary language (i.e., English); adding, that these students are able to outperform their non-ELL peers after four to seven years (p. 8). Furthermore, the U.S. government, until the Education Amendments of 1984, dedicated most of its funding for bilingual education programs. The fact that WIDA Tier A students are making progress at a faster rate but are unable to close the gap entirely (i.e., once they reach a higher level of English language acquisition) may have implications for the kinds of supports provided to students at varying WIDA tiers.

Additionally, the results indicated that SES and ESE status influenced the academic performance of ELL students. Regarding SES status, the school district should focus on low SES ELL students because both the extant literature and study support the fact that their performance is lower than high SES ELL students. As a result, low SES ELL students should receive more targeted supports and interventions because they might not be proficient in their native language which affects the rate of acquisition on the second language. Moreover, since there is a dearth in the literature of the performance of students that are both ESE and ELL in mathematics and reading, the school district should establish an ELL and ESE task force to explore the interventions and supports that should be in place to address the specific needs of this group of ELL students.

The results also indicated that two years is not enough time for an ELL student to develop academic language proficiency and perform at or above the level of their non-ELL peers. Currently, the standardized test scores of ELL students are counted for growth points, after one examination (i.e., in the state of Florida, the standardized test scores of ELL students are used for

growth points after one examination of the mathematics or reading FSA), then after the second examination ELL students have to show proficiency. The results of the study support an extended period for which ELL students count for growth points, which would allow the development of the ELL students academic language proficiency. These results might serve as part of the school district's argument when lobbying state and federal governments in their efforts to increase the ELL accountability mark.

In addition, Bumgarner and Lin (2014) explain the importance of early childhood education and the special significance it has for students from ELL families (p. 256). These results might be interpreted as a guide to structure the early childhood programs, the school district offers (e.g., Voluntary Pre-Kindergarten programs), and to ensure it is reaching out to the most vulnerable communities because as Han et al. (2014) states, a large number of the ELL student population do not understand the importance of such programs (p. 841).

Recommendations for Further Research

The results show that WIDA Tier A students are growing at a faster rate than the other WIDA tier subgroups. Thus, further research is needed to understand the different ELL instructional models, and how they impact academic performance. In relation to the academic performance of ELL students, further research might explore the relationship of an ELL student's native language and English (i.e., does an ELL student's native language affect his or her rate of acquisition of English). Also, since the extant literature and the study showed the impact of SES status on ELL students, further research is needed to determine if the effects of SES status are larger in lower level (elementary) or higher-level grades (high school).

Furthermore, since there is a dearth in the literature of the performance of students that are both ESE and ELL in mathematics and reading, further research must be done to determine

the effects of ESE status in ELL students. These studies might explore how the rate of acquisition is affected by the different exceptionalities, and if these effects change or maintain throughout K-12. Additionally, a different study might focus on the different ELL and ESE instructional models to determine which one is the most effective to improve academic performance in this subgroup of the ELL population. Lastly, as the results indicate that two years is not enough time for an ELL student to acquire academic language proficiency, further research in a different school district, with similar demographics, might help to understand the significance of the results and influence policy. This further research should incorporate both the WIDA tiers and the six levels found in the WIDA ACCESS for ELLs 2.0 assessment of Entering, Emerging, Developing, Expanding, Bridging, and Reaching for a more in depth look at the performance of ELL students (Center for Applied Linguistics, 2018, p. 3).

Summary

The study sought to explore the differences in academic performance of middle school ELL and non-ELL students in grades sixth, seventh, and eighth during a term of two years. The findings for Research Question 1 indicate that while WIDA Tier A students are making higher gains, they are not able to outperform WIDA Tier C students due to a lower level of academic language proficiency. In addition, the findings for Research Question 2 suggest that while ELL students are making progress at a faster rate, in mathematics and reading, two years is not enough time for their performance to be comparable to their non-ELL peers. The ancillary analysis conducted for Research Question 3 shows that non-ELL students outperform ELL students in both subjects (i.e., mathematics and reading) in the hypothetical additional year.

Since the Elementary and Secondary Education Amendments of 1967, the appropriations of funds for ELL education have increased exponentially, the rights of ELL students have been

protected by all branches of the federal government, and we have a greater understanding of second language acquisition. Yet, ESSA, created an ELL accountability mark that is not supported by second language acquisition research, and in doing so it negatively affects the academic progress of ELL students in U.S. public schools. The findings of each research question contribute to the different implications for practice, which are connected to the recommendations for further research.

APPENDIX: IRB APPROVAL



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

NOT HUMAN RESEARCH DETERMINATION

**From: UCF Institutional Review Board #1
FWA00000351, IRB00001138**

To: Francisco Rivera

Date: October 23, 2018

Dear Researcher:

On 10/23/2018, the IRB determined that the following proposed activity is not human research as defined by DHHS regulations at 45 CFR 46 or FDA regulations at 21 CFR 50/56:

Type of Review: Not Human Research Determination
Project Title: An Investigation of the Appropriateness of the English
Language Learner Accountability Mark Established by the
Every Student Succeeds Act of 2015.
Investigator: Francisco Rivera
IRB ID: SBE-18-14384
Funding Agency:
Grant Title:
Research ID: N/A

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

This letter is signed by:

A handwritten signature in black ink, appearing to read "Racine Jacques".

Signature applied by Racine Jacques on 10/23/2018 08:11:35 AM EDT

Designated Reviewer

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