EXAMINING THE RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND ENGLISH LANGUAGE PROFICIENCY

by

Cynthia Grant Hyacinth

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

Liberty University, Lynchburg VA

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APPROVED BY:

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ABSTRACT

English language learners continue to be a growing demographic in American schools. Despite this, linguistically diverse students' academic achievement continues to lag behind their native English-speaking counterparts. Historically, language proficiency measures have measured language proficiency in terms of social English, neglecting the importance of academic language development. Using Cummins' threshold hypothesis as a framework for distinguishing social English development from academic language development, language proficiency assessments and standardized assessments focused on reading achievement were examined. The purpose of this quantitative, correlational study was to determine if a relationship exists between 5th grade English language learners scores on a state-mandated standardized assessment and a language proficiency exam that measures academic language development. The instruments used to conduct this study were the 5th Grade North Carolina End-of-Grade Reading Test and the World-Class Instructional Design and Assessment (WIDA) Assessing Comprehension and Communication in English State to State (ACCESS) language proficiency exam. Participant scores from a suburban school district in North Carolina during the 2018–2019 school year were used. The results from the study demonstrated there was a significant relationship between academic achievement as measured by the North Carolina EOG reading test and language proficiency as measured by the WIDA ACCESS exam for fifth-grade English language learners. Recommendations for further study include examining English language learners scores across a range of content areas.

Keywords: English language learners, academic language proficiency, ACCESS for ELLs, North Carolina End-of-Grade Test, reading, threshold hypothesis, achievement gap

Dedication

"The second son he named Ephraim and said, "It is because God has made me fruitful in the land of my suffering." ~ Genesis 41:52 NIV

This dissertation is dedicated first and foremost, to my loving Heavenly Father. Without Your guidance, discernment, provision, and protection this work would never have come to fruition. Secondly, I dedicate this dissertation to my loving family. To my husband, Samuel, thank you for urging me to begin this journey. Our love has been tested but God has shown His power through our marriage, and I'm thankful for the restoration He is working in our lives. To my mother, Eula, who has always been my supporter, encourager, and sometimes critic (LOL), I love you and thank you. Your dedication and sacrifice as a mother are major factors as to why I am here today. To my son, Wisdom, I want to be a better human being and more faithful follower of our Lord Jesus because of you. May you witness how the Lord helps me heal and mature to such an exceptional standard that you will be compelled to love Him. To my big sister Dana and big brother Steve, you have always protected and counseled me with lovingkindness. I thank you.

For many years, becoming a Doctor of Education was a lofty goal, nothing I ever set a plan to achieve. It sounded nice and the next logical step in my career advancement, but it was not my passion. My true passion was to be a godly wife, mom, daughter, and defender of the least of these. However, when my plans met God's providence, things changed. I had no idea when I set out on this journey the valleys I would encounter, but completing this dissertation became a tool Abba used to direct, heal, recover, and restore. For that reason, I would like to lastly dedicate this dissertation to any student who may be walking through affliction of any kind. May God strengthen you and provide for you until you can say "it was good that I was

afflicted, that I might learn thy statues" (Psalm 119:71 KJV). This dissertation is my Ephraim and as He did it for me, I know He can do it for others.

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Basic Interpersonal Communication Skills (BICS)

Cognitive Academic Language Proficiency (CALP)

English Language Learners (ELL)

English Learner (EL)

English for Speakers of Other Languages (ESOL)

Every Student Succeeds Act (ESSA)

Teaching English to Speakers of Other Languages (TESOL)

Total Physical Response (TPR)

North Carolina End-of-Grade Test (EOG)

World-class Instructional Design and Assessment (WIDA)

CHAPTER ONE: INTRODUCTION

Overview

In this chapter, the academic difficulties facing English language learners in the area of reading is examined through the lens of the testing used to assess their language proficiency. Historically, language proficiency exams have measured students' language proficiency progress in the area of social English as opposed to measuring their progress in the area of academic English. Social English denotes the discourse of daily life used to operate in English-speaking environments while academic English refers to the vernacular used in school settings such as content-specific vocabulary and transitional phrases used in academic texts. The World-Class Instructional Design and Assessment (WIDA) consortium has focused on developing standards and designing language proficiency testing that measures academic English. The Assessing Comprehension and Communication in English State-to-State (ACCESS) for English learners exam developed by WIDA asserts to be developed specifically to measure academic English language proficiency. The ACCESS for English language learners' exam is given to language learners in the state of North Carolina to measure their progress towards full English proficiency. Beginning in third grade, and in subsequent years, these students take the North Carolina End-of-Grade (EOG) test in reading to measure their academic achievement in the area of literacy.

This study sought to determine if a relationship existed between the ACCESS exam for English language learners and the fifth-grade North Carolina EOG test in reading as well as the strength and direction of the relationship. This information may be used to identify the extent to which the ACCESS exam measures the academic language essential for academic achievement on standardized testing measures. Correlational models that analyze the relationship between language proficiency exams and standardized testing measures for improved identification of the

academic and language needs of English language learners would be helpful as schools strive to meet the academic standards set by current legislation.

Background

Culturally and linguistically diverse students have continued to be a growing population in American classrooms. Ethnic minorities' percentages have steadily grown since the end of World War II (Parkay, Anctil, & Hass, 2014). This increasing diversity in the United States has impacted the nation's schools. According to the Center for Immigration Studies (2007), "Immigrants and their young children (under 18) now account for one-fifth of the school-age population, one-fourth of those in poverty, and nearly one-third of those without health insurance, creating enormous challenges for the nation's schools" (p. 45). These changes in the racial and ethnic composition of student populations also expand the assortment of languages within American schools.

English is the primary language spoken in schools and businesses, placing a language barrier between linguistically diverse students and academic achievement. Historically, curriculum leaders have struggled to accommodate the diverse needs of language learners, particularly in the courses where proficiency in content-specific vocabulary is necessary for success. The growing achievement gap between linguistically diverse and native English speakers demonstrates that the needs of these students have continued to be unmet by current efforts. Large-scale assessment data and policy "reports on the achievement outcomes of these students suggests that the achievement gaps with non-minority-language populations is both sizeable and persistent" (Drake, 2014, p. 327).

Accountability and assessments have created a culture of measurement that magnifies these achievement gaps (Padilla, 2005). English language learners are a population of students

with a unique set of challenges and academic needs. As well as learning grade-level content, linguistically diverse students are also learning English. Cummins (1979) is renowned for examining and describing this difference between the function of language. Cummins (1979) defined language used to communicate needs and build relationships as Basic Interpersonal Communicative Skills (BICS); he classified language that utilizes content specific vocabulary to demonstrate comprehension in academic settings Cognitive Academic Language Proficiency (CALP). Novice English language learners mostly use language as a basic tool to communicate. However, as school experiences become cognitively demanding, more complex language structures are needed in order to perform successively in academic settings (Lorenzo & Rodriguez, 2014).

In conjunction with the designation of the different functions of language, BICS and CALP, Cummins (1979) proposed the threshold hypothesis as an attempt to examine the relationship between bilingualism and cognition. The threshold hypothesis suggests that there must be "threshold levels of linguistic competence which bilingual children must attain in order to avoid cognitive deficits and allow the potentially beneficial aspects of becoming bilingual to influence their cognitive growth" (Cummins, 1979, p. 229). The threshold hypothesis serves as an effective theoretical framework when examining English language proficiency and academic achievement.

English learners' performance on academic content assessments is used to "identify schools and districts where they are failing to meet achievement benchmarks set for all students" (Sireci & Faulkner-Bond, 2015, p. 218), but assessments measuring their proficiency in English have historically measured social English rather than academic English. Academic English refers to the language "used in school to help students acquire and use knowledge" (DiCerbo,

Anstrom, Baker, & Rivera, 2014, p. 446). Cummins' threshold hypothesis theory and Chomsky's formal language theory have both distinguished between academic and social English. Cummins' threshold hypothesis develops a theoretical framework that develops a relation between bilingualism and cognition (Daller & Ongun, 2018). Cummins' found that academic tasks require "linguistic demands" that distinguish academic English from the "spoken language English language learners acquire more readily" (DiCerbo et al., 2014, p. 449). In line with Cummins' ideas about basic interpersonal communication skills is Chomsky's formal language theory. Chomsky (1965) theorized that basic language skills, word knowledge, phonological, syntactical, and lexical components are universal across language speakers. Cognitive academic language proficiency typically occurs in exchanges that require prior knowledge such as the higher level of academic language proficiencies found on standardized assessments (Cummins, 1979). Assessments that do not account for the cognitive effects are unable to provide an accurate measure of English learners' academic capacity.

While clarifying the distinctions between social and academic English is helpful, assessors still found it difficult to create authentic assessments that could be used to measure students' language proficiency. Assessing proficiency in an additional language can be challenging. Developing assessments for English language learners in schools is especially complex. Valid assessment of language learners' "knowledge, skills, and abilities centers on the degree to which the assessments adequately measure the constructs they are designed to measure" (Sireci & Faulkner-Bond, 2015, p. 220). Assessment developers must identify if their assessment measures social English or academic English.

In response to state demands for an assessment tool for English learners, WIDA (World-class Instructional Design and Assessment) partnered with the Center for Applied Linguistics to

develop, refine, and expand the annual Accessing Comprehension and Communication in English State-to-State (ACCESS) test (WIDA, n.d.). In 2003, Wisconsin Department of Public Instruction was awarded an Enhanced Assessment Grant, which led to the development of WIDA (WIDA, n.d.). After its establishment, WIDA developed the English Language Proficiency Standards which served as the basis for the ACCESS for English language learners' test of English language proficiency. The organization's mission is to advance academic language development and academic achievement for language learners (WIDA, n.d.).

According to Ardasheva, Tretter, and Kinny (2012), English proficiency defined as "language-specific knowledge," such as "contextually appropriate" language usage, grammatical structures, and vocabulary, has been determined to be a high "student-level predictor" of academic achievement. Therefore, the importance of developing and administering language proficiency testing that measures academic English is a necessary component to ensure English language learners' academic achievement. This type of attention to academic language assists English language learners across the core school curriculum. Identifying students who lack skills in these areas can be helpful for instructional grouping and strategic instruction prior to the North Carolina EOG testing.

Problem Statement

Recent studies have recognized the interdependence between language proficiency and academic achievement, particularly in the area of reading (Stoffelsma & Spooren, 2019). Swanson et al. (2017) found that in the middle grades, it is necessary for students to utilize "reading and comprehension skills" that should have been mastered in elementary school to learn "a great deal of new information in content area classes" (p. 37). Additionally, state and national standards require the integration of "literacy standards" in other content areas such as science,

social studies, mathematics, and other "technical subjects" (Swanson et al., 2017, p. 37). This marked shift in learning expectations has impacted how academic achievement in literacy is measured on standardized assessments as well. Current research demonstrates a focus on "disciplinary literacy" (Stoffelsma & Spooren, 2019, p. 906), or content-specific literacy, which encompasses the literacy skills and vocabulary knowledge necessary for students to understand concepts in particular areas of study such a mathematics, social studies, and science.

These updated academic demands can be difficult for students with insufficient reading skills to meet. The National Center for Education Statistics (2018) found that only 37% of fourth-grade students performed at or above the proficient level in 2017. For English language learners, meeting the demands of the curriculum is even more difficult. In 2017, the average reading score for fourth-grade English language learners was 37 points lower than the average score for their native speaking peers (National Center for Education Statistics, 2018).

While recent research presents a presumption that students' academic performance in the area of literacy will be related to students' English language proficiency, few studies have actually examined this relationship (Stoffelsma & Spooren, 2019). In reviewing the literature, a clear gap exists in the area of ensuring that language proficiency assessments are equitable in addressing content area assessment challenges. Therefore, a significant problem with language proficiency testing and academic achievement as measured by state standardized assessments exists. In particular, English language learners in the state of North Carolina consistently perform below their native-speaking peers on the fifth-grade EOG exam. Due to the widening achievement gap, it is unclear if the results on the WIDA Access Language Proficiency Exam accurately depicts the language competencies needed to pass the fifth-grade North Carolina EOG exam. The problem is that the relationship between English language proficiency as measured

by the World Class Instructional Design and Assessment (WIDA) ACCESS Exam and academic achievement in reading as measured by the fifth-grade North Carolina EOG test remains unknown as does the ability to predict academic achievement based on English language proficiency.

Purpose Statement

The purpose of this quantitative, correlational study is to determine if a relationship exists between English language proficiency as measured by the ACCESS Exam and academic achievement in reading as measured by the fifth-grade North Carolina EOG test. For the purpose of this study, English language proficiency, the predictor variable, will be defined as the student's ability to communicate in English in academic settings. English language proficiency will be measured using WIDA's ACCESS exam. This exam provides students with a level of language proficiency on a scale from 1 (Entering) to 6 (Reaching). The ACCESS Exam is given annually to English language learners who have not achieved an exemplary status in all four domains of language: speaking, listening, reading, and writing per the grading rubric for the exam. Academic achievement, the criterion variable, is defined as the students' ability to utilize literacy skills and demonstrate proficiency on standardized assessments. Academic achievement will be measured using the fifth-grade North Carolina EOG test in reading. The North Carolina EOG is given annually beginning in third grade for reading. This study will also examine the strength and direction of the relationship between academic achievement and language proficiency.

Significance of the Study

It is hypothesized that the WIDA ACCESS test will be found to have a positive relationship with the academic achievement of language learners on the North Carolina EOG test

in reading. According to Fillmore (2014), the language barrier presents obstacles in our schools, "stemming from first, fundamental misunderstandings about what English language learners need, and second how to support both language and academic development at the same time" (p. 624). Correlational data will assist teachers as they plan interventions to support language learners as they acquire English and content knowledge. In order for language learning to be successful, a variety of strategies and rigorous instruction is required because it is such a complex process. Unfortunately, many language services lack this type of rigor. Kim and Garcia (2014) asserted that while many English language learners have attended schools in the United States for an extended period of time, they may not have received "adequate English language development and academic instruction to meet their needs" (p. 300).

Assessing proficiency in an additional language has proven to be a challenging task. While language testing is a "central mechanism of both language policy and education policy" Gaillard & Tremblay, 2016, p. 420), assessors must decide "what aspects of proficiency to assess and how to assess them" (King & Bigelow, 2018, p. 937). Developing assessments for English language learners in schools is a laborious task. Valid assessment of language learners' "knowledge, skills, and abilities centers on the degree to which the assessments adequately measure the constructs they are designed to measure" (Sireci & Faulkner-Bond, 2015, p. 220). Assessment developers must identify if their assessment measures social English or academic English. This study seeks to examine if the WIDA ACCESS test is an accurate measure of the academic English necessary for language learners to earn a passing score on the North Carolina EOG reading test in fifth grade.

Research Questions

RQ1: Is there a relationship between English language proficiency as measured by the WIDA ACCESS English Language Proficiency Exam and academic achievement as measured by the fifth-grade North Carolina End-of-Grade Reading Test?

RQ2: Is there a statistically predictable relationship between WIDA ACCESS English Language Proficiency Exam (predictor variable) and the fifth-grade North Carolina End-of-Grade Reading Test (the criterion variable), as measured by student attainment of language proficiency Level 4 (Expanding), Level 5 (Bridging), or Level 6 (Reaching) on the WIDA ACCESS English Language Proficiency Exam?

Definitions

1. *ACCESS for English language learner students* – Assessing Comprehension and Communication in English State-to-State is an assessment of language proficiency developed by WIDA (WIDA, n.d.).
2. *English Language Learner* (ELL) – English language learner is a student who does not speak English as his or her native language and demonstrates limited proficiency in English (WIDA, n.d.).
3. *English Learners* (ELs) – Used interchangeably with English Language Learner.
4. *Every Student Succeeds Act* (ESSA) – Legislation signed by President Obama on December 10, 2015, that reauthorizes the 50-year-old Elementary and Secondary Education Act (Sugarman & Geary, 2018).
5. *No Child Left Behind Act* (NCLB) – A federal law that provides money for extra educational assistance for poor children in return for improvements in their academic progress (Boals et al., 2015).

6. *Teaching English to Speakers of Other Languages* (TESOL) – An organization focusing on the development of English language learners (Teachers of English to Speakers of Other Languages, 2005).
7. *Total Physical Response* (TPR) – A language teaching method developed by James Asher, a psychology professor at San Jose State University (Sühendan, 2013).
8. *World-class Instructional Design and Assessment* (WIDA) – WIDA is a consortium of 40 states who have adopted the WIDA English Language Development Standards and the ACCESS for English language learner students (WIDA, n.d.).

CHAPTER TWO: LITERATURE REVIEW

Overview

This literature review provides an understanding of the relationship between language proficiency and the academic achievement of English language learners in public schools. English language learners are among one of the fastest-growing demographics in American schools. While these students are on track to becoming a significant percentage of the student population, their unique academic needs have continued to go unmet. In an attempt to better understand the achievement gap that exists between English language learners and their native speaking peers, this study examines the characteristics that distinguish "academic English" from social English, which English learners "acquire more readily" (DiCerbo et al., 2014, p. 449) and has led to the development of language proficiency tests that deem students fully proficient in social English, ignoring student deficits in academic English. These misunderstandings about what constitutes language proficiency has contributed to some of the academic difficulties English language learners have encountered (DiCerbo et al., 2014). This is especially problematic in the current era of standardized testing, where academic English is the focus. Ensuring that students are assessed with language proficiency tests that measure language proficiency in the terms of students' grasp of academic English should be the goal for school systems in the United States. The theoretical framework underpinning this study is based on Cummins' (1979) threshold hypothesis theory, which divides language proficiency into two categories: basic interpersonal communication skills and cognitive academic language. Cummins' threshold hypothesis is further supported by ideas presented in Chomsky's formal language theory. This review of the literature demonstrates how language proficiency is

assessed and the impact these examinations have on content area assessment performance by English language learners.

Theoretical Framework

The ideas presented in this literature review are based on the theoretical frameworks of Cummins' threshold hypothesis theory and Chomsky's formal language theory. A linguist and professor, Cummins' (1979) work centered on the language and literacy development of English learners. Cummins (1979) argued that the ability to manipulate language as a tool for learning within academic settings was a more developed form of language than the language needed to navigate social situations. Cummins' argument provided "one of the first paradigms for thinking about academic English" (DiCerbo et al., 2014, p. 449).

Research conducted during the early 20th century found a "bilingual disadvantage and negative correlation" between linguistic diversity and "general cognition" (Daller & Ongun, 2018, p. 676). Frequently studies found that "bilingual children performed poorly on the verbal parts of intelligence tests as well as on academic tasks and several investigators argued that bilingualism itself was a cause of mental confusion and language handicaps" (Cummins, 1979, p. 223). Language diversity was seen as a disadvantage causing psychological and educational problems (Daller & Ongun, 2018).

Many of the studies conducted during the early 20th century did not account for other impacting factors such as socioeconomic status, schooling environment, and political bias (Daller & Ongun, 2018, p. 676). It was not until the second half of the 20th century that research began supporting positive effects of bilingualism and cognition (Daller & Ongun, 2018). Emerging studies suggested that rather than being a "cause of cognitive confusion, bilingualism could positively influence both cognitive and linguistic development" (Cummins, 1979, p. 223).

Cummins' Threshold Hypothesis

Cummins' (1979) threshold hypothesis was one of the most significant studies to emerge during that time. This hypothesis infers that there is a "threshold level of language proficiency" that bilingual students must achieve both in order to avoid "cognitive deficits" and to allow the "potential benefits of being bilingual" (Ríordáin & O'Donoghue, 2009, p. 43) to be seen and useful for students. Once a student has reached a minimum level of proficiency in the language they are acquiring, "aspects of bilingualism which might positively influence cognitive growth are unlikely to come into effect" (Cummins, 1979, p. 229), with the assumption that below a certain level of proficiency in either language, bilingualism could have a damaging cognitive effects (Daller & Ongun, 2018). Once students achieve proficiency above that level, damaging effects are nonexistent, and as proficiency increases above certain thresholds, benefits can be identified (Daller & Ongun, 2018).

In other words, "there may be threshold levels of linguistic competence which a bilingual child must attain both in order to avoid cognitive disadvantages and allow the potentially beneficial aspects of bilingualism to influence his cognitive and academic functioning" (Cummins, 1979, p. 222). Students whose proficiency is low in their native language and the language they are acquiring are likely to have "impoverished interaction with their educational environments, both in terms of input and output" (Cummins, 1979, p. 230). This "impoverished interaction" causes "academic disadvantages in schools" (Cummins, 1979, p. 230) since many academic tasks, especially in the higher grades, require proficiency in cognitive academic language. During the early school years, language is mostly a fundamental tool for communicative purposes (Lorenzo & Rodriguez, 2014). Cummins (1979) hypothesized that "bilinguals with sufficient competency in one of their languages would experience no such

disadvantages and students fully proficient in both languages would enjoy cognitive and academic advantages associated with bilingualism" (p. 230). As school experience starts to shape language, language structures become increasingly taxing cognitively as language is now being used for academic purposes (Lorenzo & Rodriguez, 2014). Therefore, the importance of students reaching proficiency within the higher threshold becomes evident.

Cummins (1979) asserted that "levels of bilingualism have a mediating effect on the cognitive and academic functioning of students and proposed two thresholds, the lower and the higher level of bilingual competence" (p. 229). At the first level of Cummins' hypothesis, bilingual students have a low level of proficiency in both languages. The lower threshold level of bilingual competence "proposes that bilingual children's competence in language may be sufficiently weak as to impair the quality of their interaction with their educational environment through that language" (Cummins, 1979, p. 230). According to Ríordáin and O'Donoghue (2009), there will be "negative cognitive effects" (p. 46) for the students' learning, especially in content areas such as science, social studies, and mathematics. This lower threshold cannot be defined "in absolute terms; rather it is likely to vary according to the children's stage of cognitive development and the academic demands of different stages of schooling" (Cummins, 1979, p. 230). In the early grades, the weaker competence in language is not as noticeable because the "children's interaction with environment and consequently cognitive development is less dependent on the mediation of language than at later grades" (Cummins, 1979, p. 230). The cognitive demands of the early grades causes the lower threshold to only involve a "relatively low level of listening comprehension and expressive skills" (Cummins, 1979, p. 231). The higher threshold level of bilingual competence suggests that "an additive form of bilingualism can positively influence cognitive functioning" (Cummins, 1979, p. 231). Students achieving the

higher threshold level of competence can be expected to "reap the cognitive benefits of their bilingualism" (Cummins, 1979, p. 231). However, a prerequisite of "attaining a higher threshold level of bilingual competence is maintenance" (Cummins, 1979, p. 232) of skills in the native language.

These thresholds are embedded in the concepts of basic interpersonal communication skills and cognitive academic language proficiency. Cummins (1999) explained that not all aspects of language use or performance can be "incorporated into one dimension of global language proficiency" (p. 2). Cummins (1999) used the following analogy to further explain the varying aspects of language:

> If we take two monolingual English-speaking siblings, a 12-year old child and a six-year old, there are enormous differences in these children's ability to read and write English and in their knowledge of vocabulary, but minimal differences in their phonology or basic fluency. The six-year old can understand virtually everything that is likely to be said to her in everyday social contexts, just as the 12-year old can (p. 2).

Similarly, in second language acquisition contexts, "immigrant children often acquire peer-appropriate conversational fluency in English within about two years, but it requires considerably longer (5–10 years) to catch up academically in English" (Cummins, 1999, p. 2). The length of time it takes to develop proficiency in these two different aspects of language demonstrates the clear differences in acquisition and developmental patterns between conversational language and academic language (Cummins, 1999).

Conversational Language and Academic Language Acquisition

Theories of language acquisition abound. Chomsky's (1965) formal language theory mirrors ideas presented by Cummins' distinction between social and academic English. In his

formal language theory, Chomsky (1965) theorized that basic language skills, word knowledge, phonological, syntactical, and lexical components are universal across language speakers. The ability to handle increasing word complexity and length over time and understanding complex sentence structures and corresponding syntax of the English language are all aspects of academic language (Francis et al., 2007).

To study actual linguistic performance, Chomsky (1965) explained that consideration must be given to "the interaction of a variety of factors, of which the underlying competence of the speaker-hearer is only one factor" (p. 2). Therefore, a fundamental distinction between "competence, the speaker-hearer's knowledge of his language, and performance, the actual use of language in concrete situations" (Chomsky, 1965, p. 3). It is clearly understood that "one of the qualities that all languages have in common is their creative aspect" (Chomsky, 1965, p. 4). Therefore, an "essential property of language is that it provides the means for expressing indefinitely many thoughts and for reacting appropriately in an indefinite range of new situations" (Chomsky, 1965, p. 4).

Chomsky (1965) found that historically, we can distinguish two general lines of approach to the problem of language acquisition: "the empiricist approach and the rationalist approach" (p. 49). The empiricist approach has assumed that "the structure of the acquisition device is limited to certain elementary peripheral processing mechanisms" (Chomsky, 1965, p. 48). The rationalist approach holds that "beyond the peripheral processing mechanisms there are innate ideas and principles of various kinds that determine the form of the acquired knowledge in what may be a rather restricted and highly organized way" (Chomsky, 1965, p. 49). The empiricist approach proposes that language acquisition occurs in natural contexts. This is similar to the process Cummins (1999) described when English language learners acquire conversational

language skills. The rationalist approach examines the complexities of acquiring academic language.

Researchers have found that having a clear distinction between academic and social English impacts the achievement of English language learners. To provide further proof of the existence of two distinct language proficiencies, Cummins (2000) pointed out:

> Another way of expressing this difference is to not that native-speakers of any language come to school at age five or so virtually fully competent users of their language. They have acquired the core grammar of their language and many of the sociolinguistic rules of using it appropriately in familiar contexts. Yet, schools spend another 12 years (and considerable public funds) attempting to extend this basic linguistic repertoire into more specialized domains and functions of language. Academic language proficiency is what schools focus on in this endeavor. (p. 59)

Failure to account for the conceptual differences between social English and academic English has led to "inappropriate psychological testing of bilingual students and premature exit from bilingual or English for Speakers of Other Languages support programs into mainstream classes where students received minimal support for continued academic language development" (Cummins, 1999, p. 3).

In conclusion, the idea of basic interpersonal communication skills and cognitive academic language proficiency has been investigated from various perspectives in linguistics. Cummins' work created a foundation of this discussion that offered a more in-depth understanding of second language acquisition. In the early 20th century, linguists did not take into account language distribution across social and academic environments and deemed

bilingualism as a disadvantage. The development of a clear distinction between social and academic language provided a clearer framework for the two sides of language production.

Related Literature

English Language Learners

Language is a primary tool for a person's mental representation. A human phenomenon, people interact through sounds, symbols, gestures, and signs to communicate their thoughts with others. Learning and cognitive processing are dependent upon language. Since the use of language to represent thinking and learning is not unique to any one group, all students could be considered language learners. However, school-aged children who are exposed to cultures and languages other than English in their daily interactions with their family and community are considered linguistically and culturally diverse students. These diverse cultural and linguistic customs provide students with different perceptions and interactions that impact the way they learn English (Gottlieb, 2016). By definition, *English language* learners are "people who need and use English and two or more other languages in their everyday life" (Ardasheva et al., 2012, p. 770). At the opposite end of the language learning spectrum, students born and raised in the United States who identify with one or more multicultural groups and may communicate in English and other languages are known as *heritage language* learners (Gottlieb, 2016). Similar to heritage language learners, there are indigenous cultural groups who have lived in the United States for generations and wish to preserve or revitalize their linguistic and cultural roots (Gottlieb, 2016).

Identification of English language learners. For all of classifications of language learners, English is an additional language and in order to reach full proficiency, English language learners need language support. Identification of these students is the genesis of being

able to offer educational services for language learners. Federal guidelines require all states to follow a procedure with two steps in identifying students as English learners. Parents or guardians must complete a home-language survey when they enroll their child in a new school (Sugarman & Geary, 2018). This survey generally includes "one to four questions to identify students whose first language in not English or who live in households where a language other than English is spoken" (Sugarman & Geary, 2018, p. 6). When families indicate a home language other than English on the home-language survey, district personnel follow up with an interview to confirm the home language (Sugarman & Geary, 2018). Screening and assessments provide data that can be used to establish the level of English students possess. English language learners whose current levels of English language proficiency impede their ability to access, process, and acquire unmodified grade-level material in English without modifications and differentiation should be included in school programs designed to support English language acquisition.

Growing demographics of English language learners in the U.S. Linguistically diverse students are a growing population across the United States. The burgeoning linguistic and cultural diversity of students in the United States has impacted the nation's schools. According to Stoffelsma and Spooren (2019) globally, the increase of migration has caused bilingual and multilingual contexts are growing. This increase in the number of students who represent our nation's multitude of languages and cultures has affected educational policy, teachers, administrators, and school leaders from preschool through high school (Gottlieb, 2016).

Culturally and linguistically diverse students were once considered a minority. However, their staggering growth has caused these students to now form a majority demographic in American schools. While Texas has held this majority-minority student status since 2004, at the

beginning of the 2014–2015 school year, the minority student population increased to the point where nationally it became the majority (Gottlieb, 2016). Whereas in the past decade English language learners represented one in nine students in public schools, it is projected that by 2025 one in four students will be an English language learner (McBride, Richard, & Payan, 2008). Table 1 shows the prekindergarten through high school demographic surge and decline of the largest racial/ethnic groups for two decades, ending in 2023 (National Center for Education Statistics, 2014).

Table 1

Percentage Change and Projected Change in Ethnicity in the PreK–Grade 12 Student Population over Two Decades

	Change from 2001 to 2011	Total %	Projections from 2012 to 2023	Total %
Hispanic	+3.6 million (+7%)	25%	+3.4 million	30%
Asian/Pacific Islander	+.8 million (+8%)	5%	+ .4 million	5%
Black	-.6 million (-1%)	15%	- .2 million	15%
Non-Hispanic White	-3.1 million (-8%)	50%	- 2 million	45%

Note. Adapted from "Racial/Ethnic Enrollment in Public Schools," by National Center for Education Statistics, 2014, http://nces.ed.gov/programs/coe/indicator_cge.asp. In the public domain.

Using the U.S. Census Bureau 2016 American Community Survey, 5% of U.S. children ages 5 to 17 are limited English proficient (Sugarman & Geary, 2018). These changes in the racial and ethnic composition of student populations also expand the variation of languages within American schools. While English language learners reside throughout the United States, 61% of the nation's ELL population is heavily concentrated in six states: Arizona, California, Texas, New York, Florida, and Illinois (McBride et al., 2008). However, other states including Alabama, Indiana, Kentucky, Nebraska, North Carolina, South Carolina, and Tennessee experience English language learner growth rates of 300% or higher between 1995 and 2005

(McBride et al., 2008). While, this explosion of linguistic and cultural diversity presents many opportunities for our nation's schools, English is the primary language spoken in schools and businesses in the United States. This places a language barrier between academic achievement and English language learners.

Historical context of English language learners in American schools. The "educational rights of students learning English as an additional language have been federally protected for over 40 years" (Boals et al., 2015, p. 123). The pursuit of educational equity has been a part of U.S. history for racial minorities and people from diverse linguistic and cultural heritages. Beginning with the 1954 U.S. Supreme Court decision in *Brown v. Board of Education* that eliminated racial segregation, succeeding decades have included additional attempts to address social and educational inequities (Gottlieb, 2016).

The Civil Rights Act of 1964 started the process of creating equal access to education for ethnic minorities. While this drew attention to the achievement gap of certain "social and economic groups" (Boals et al., 2015, p. 124), English language learners were not specifically addressed in the Civil Rights Act of 1964. In 1965, the Elementary and Secondary Education Act was introduced. This act attempted to have states and school districts take a greater level of accountability for improving the academic performance of students regardless of "economic status, race, ethnicity, proficiency in English, or disability" (Gottlieb, 2016, p. 2). It was not until 1968 when the Bilingual Education Act was enacted that the instructional needs of language minority students were specifically addressed and "local funding to support educational programs in students' native languages" (Boals et al., 2015, p. 124) was provided.

In 1974, the Supreme Court ruled that language discrimination amounted to discrimination of national origin in the landmark class action suit *Lau v. Nicholas*, creating the

need to "identify and place students referred to as 'limited English-proficient' for bilingual or English as a second language services" (Boals et al., 2015, p. 124). In addition to endorsing bilingual education, *Lau v. Nichols* expanded the rights of English language learners by ruling in the favor of Chinese students who were denied equal educational opportunities on the basis of their ethnicity and language background (Gottlieb, 2016). Eligibility for language services was established by determining "(a) the student's first language, and the language most often spoken by the student, and (b) the students' linguistic ability in English" (King & Bigelow, 2018, p. 937).

The Equal Educational Opportunities Act of 1974 permanently established the educational rights of language minority students, which "required states to ensure that an education agency takes appropriate action to overcome language barrier that impede equal participation by its students in its instructional program" (Boals et al., 2015, p. 125). In 1981, *Castaneda v. Pickard* extended the Equal Educational Opportunities Act by stating that "English language learners must receive appropriate educational services and that those services should be provided with defensible methodologies leading students to overcome the barrier to learning" (Boals et al., 2015, p. 125). Known as the *Castaneda* criteria, a school district's program for English Language Learners students must 1) be based on an educational theory recognized as sound by experts in the field, 2) be implemented with adequate resources and personnel, and 3) be evaluated by the district to determine whether it is achieving results and make appropriate adjustments where needed (McBride et al., 2008). The criteria provided by this framework should be used to improve policy implementation and outcomes for English language learners in American schools.

English language learners in North Carolina. In 2016, foreign-born individuals residing in North Carolina accounted for 8% (approximately 790,000 individuals) of the state population (Sugarman & Geary, 2018). Compared to other states, North Carolina has a smaller share of the immigrant population. Overall the United States has a foreign-born population of 14% (Sugarman & Geary, 2018). In North Carolina, foreign-born population growth has declined significantly over the past two decades. Foreign-born population growth rates declined from 274% in the period between 1990 and 2000 to 84% between 2000 and 2016 (Sugarman & Geary, 2018). While this growth rate slowed considerably, it "far outpaces the growth rate of the native-born population" (Sugarman & Geary, 2018, p. 1).

Table 2

Foreign- and U.S.-Born Populations of North Carolina and the United States, 2017

	North Carolina 2017		United States 2017	
	Foreign Born	U.S. Born	Foreign Born	U. S. Born
Number	829,416	9,444,003	44,525,855	281,193,3238.1
Share of total population	8.1%		13.7%	
Population Change over Time				
% change: 2000–17	92.9%	23.9%	43.1%	12.3%
% change: 1990 –2000	273.7%	17.0%	57.4%	9.3%
Age Group				
Share under age 5	1.0%	6.3%	0.7%	6.9%
Share ages 5–17	6.7%	17.4%	5.1%	18.3%
Share ages 18+	82.5%	59.9%	78.6%	59.1%

Note. Adapted from "State Immigration Data Profiles: Demographics & Social," by Migration Policy Institute (MPI) Data Hub, 2017, https://www.migrationpolicy.org/data/state-profiles/state/demographics/NC/US/. In the public domain.

In accordance with the SL 2003-84, Section 7.15 (b), the North Carolina Department of Public Instruction is required to prepare a headcount of all English Learners (ELs). This report is to be submitted to the Joint Legislative Education Oversite Committee each year. The enrollment of those students identified and assessed as ELs in accordance with the policies of the State Board of Education as of October 1, 2018, was 116,357 students (Public Schools of North

Carolina, 2018). This is an increase of 7,693 from the previous year (Public Schools of North Carolina, 2018). Of this number, 72% of school-aged children who were reported as ELs were born in the United States, "with a larger share among elementary school children than older students" (Sugarman & Geary, 2018, p. 3).

Data collected by the North Carolina Department of Public Instruction found that a "2018 analysis of language diversity in the state noted that about 17 percent of the total student population has a primary home language other than English" (Sugarman & Geary, 2018, p. 3). A total of 336 languages are represented in the homes of North Carolina students, with "three-quarters of those students speaking Spanish" (Sugarman & Geary, 2018, p. 3). Arabic, Vietnamese, Chinese, and Hindu/Urdu follow Spanish, rounding out the top five languages represented in these students' homes (Sugarman & Geary, 2018). North Carolina students deemed to be potential ELs by the home-language survey are screened using one of the World-Class Instructional Design and Assessment (WIDA) Consortium's assessments called the WIDA Screener or the W-APT. Students are identified as ELs if they score below a designated level for each test (Sugarman & Geary, 2018).

Reading development of English language learners. Many researchers assume that English reading development is influenced by students' native language (Betts, Bolt, Decker, Muyskens, & Marston, 2009). However, English Language Learners represent many diverse native languages. For this reason, it is important to "investigate English reading development separately for students of different native language backgrounds" (Betts et al., 2009, p. 146). Similar to oral language development, English language learners' reading development progresses through a "series of predictable stages" (Gottlieb, 2016, p. 106) in one or more languages.

Some languages share similar phonemic and orthographic codes as English, while others do not (Betts et al., 2009). While there is a "crosslinguistic relationship" (Betts et al., 2009, p. 147) involved in the literacy development of students with two are more languages, researchers have found that English reading development is comparably easier when the native language shares similar "phonological and orthographic patterns" (Gottlieb, 2016, p. 106). A study conducted by Wang, Park, and Lee (2006) found that phonological processing skills in English and Korean were highly correlated, while orthographic processing skills were not. Korean has a non-Roman code, unlike English. This finding suggests that new language and reading development may be facilitated and where there are differences, more resources may be needed to facilitate understanding of the new language (Wang et al., 2006).

Learning to read is a multifaceted process involving interactions between phonological awareness, vocabulary, and fluency to produce a sound comprehension of texts. While reading comprehension is an "agreed upon goal" (Gottlieb, 2016, p. 106) of the educational community, achievement of this goal has been to topic of research for decades. According to Betts et al. (2009),

> English language learners are more likely to demonstrate high levels of achievement on measures of oral reading fluency earlier, whereas it takes them longer to develop achievement in reading comprehension, which is often considered more closely to cognitive academic language proficiency. (p. 147)

The ability to apply reading skills to develop new knowledge across a variety of content areas is crucial to the academic success of all learners. This is especially important for English language learners, since reading is one "platform" for vocabulary acquisition (Francis et al., 2007, p. 13). Some English language learners are able to "develop skills for decoding without

necessarily having fully developed the vocabulary or prior knowledge necessary to understand what they are asked to read" (Betts et al., 2009, p. 147). In other words, effective reading comprehension can be decreased by a number of factors, including "word-reading accuracy and speed, vocabulary, understanding of text structure, the ability to use language to formulate and shape ideas, and the ability to make inferences from text" (Francis et al., 2007, p. 14).

For English language learners, these potential sources of comprehension difficulties are heightened because they relate to higher-order processing and unfamiliar vocabulary. Most English Language Learners do not demonstrate reading difficulties in the lower grades because the focus of reading instruction is on decoding and phonics. However, English Language Learners often times are not exposed to the language of academic texts and the academic English needed to support learning from the texts until they reach upper elementary and middle school. This shift in reading purposes and instruction causes many English language learners to perform poorly on assessments of reading comprehension.

English Language Proficiency

Language acquisition is cumulative and multidimensional. Progress from one level of proficiency to the next is not even; the skills required to move from beginning to early intermediate are much more limited than the skills required to move from intermediate to advanced. Rather than a linear progression, a more accurate view of acquisition can be represented by an inverted pyramid with beginning skills such as memorized words and phrases to communicate basic needs at the tip, while higher levels such as an ability to expand concrete topics, compare, describe, and narrate in different verb tenses are at the top (Hadley, 1993).

Language proficiency is an "expression of a student's processing and use of language within and across four language modalities: listening, speaking, reading, and writing" (Gottlieb,

2016, p. 27). Since proficiency incorporates so many different types of competencies, students who score at the same level may exhibit varying levels of ability in different subskills (Hadley, 1993). Research into sequences of acquisition in language development appears to be compatible with overall proficiency descriptors. It is commonly accepted that learners, in acquiring a first or second language, go through similar stages of development. As learners discover new rules about the language, they sort out ways that language is used and gradually achieve proficiency (Diaz-Rico & Weed, 2002).

Compared to other student subgroups which are based on special education status, gender, poverty, and ethnicity, ELs are a subgroup that ebbs and flows. As students gain proficiency, they exit the EL subgroup while new ELs are identified and enter the U.S. school system (Sugarman & Geary, 2018). English proficiency is included in states' accountability systems in two ways. States set long-term goals for increasing the percentage of students reaching English proficiency.

North Carolina has an expectation for students to take a "maximum of six years to achieve English language proficiency" (Sugarman & Geary, 2018, p. 7), with expectations set based on their initial English proficiency level. If students meet their annual personalized growth targets, they are considered to be on track. Targets are set based on the expectation that students will make "slightly more annual progress at lower proficiency levels and slightly less at higher levels" (Sugarman & Geary, 2018, p. 7). According to accountability data, about "25 percent of North Carolina ELs made enough progress" (Sugarman & Geary, 2018, p. 7) toward English proficiency during the 2017 school year within the given timeline. North Carolina aims to increase the share of ELs making the target amount of progress by between "3 percent and 4 percent each year with a goal of reaching 60 percent by 2027" (Sugarman & Geary, 2018, p. 7).

To meet guidelines set by Every Student Succeeds Act, North Carolina plans to include whether schools are making relatively less progress in moving students toward English proficiency in their "criteria for identifying schools in need of comprehensive support and improvement" (Sugarman & Geary, 2018, p. 7).

Social English. Social English is the language of everyday communication in oral and written forms. Examples include students talking to their friends on the playground or in the school, students and teachers having an informal face-to-face conversation, and students going to places like grocery stores and reading shopping lists. Social English may start developing within a few months of being in an English learning environment. ELs need little explicit instruction to develop social English. As much as possible, teachers should use an EL's background knowledge of what they know and bring to school (Eastern Stream Center on Resources and Training, 2003).

Social English development. Teachers use many resources to facilitate social English development including contextual supports through visuals, maps, charts, manipulatives, music, and pantomiming. Total physical response (TPR) is another method that can be used to facilitate the learning of social English. Similar to the way children acquire their native language, TPR attempts to teach language through speech and physical activity at the same time (Sühendan, 2013). The teacher takes on a role similar to the parent by playing games, giving prompts, and setting patterns while the student responds physically to the prompting (Sühendan, 2013). When TPR is integrated into routines, the learners will immediately become involved in the language an engaged in reacting to it (Sühendan, 2013). As students gain an intermediate level of English proficiency, teachers should use social English with contextual support to teach academic English (Eastern Stream Center on Resources and Training, 2003).

Academic English. Language is the tool teachers and students use to develop concepts and skills, form social relationships and identities, and construct increasingly deeper and more complex disciplinary understandings (DiCerbo et al., 2014). The increased pressure that comes with schooling in the United States forces English language learners to quickly produce oral and written discourses that encompass the academic language required to succeed in content-area classrooms (Francis et al., 2007). As a student progresses through school, academic demands increase which places a greater demand on a student's ability to use language in sophisticated ways (DiCerbo et al., 2014).

As stated earlier, Cummins' (1979, 1999) early research referred to the language skills used in school settings to acquire content specific information as Cognitive Academic Language Proficiency, while social language skills were referred to as Basic Interpersonal Communication Skills. The language used in classroom settings to assist students in acquiring and using knowledge is known as academic English. The distinction between academic English and social English occurs on "three levels: the lexical or academic vocabulary level, the grammatical or syntactic level, and the discourse or organizational level" (DiCerbo et al., 2014, p. 451). Cummins' work provided one of the first notions of academic English as a "specialized register" (DiCerbo et al., 2014, p. 449) of language that students need to acquire in order to be successful in academic settings.

While developing fluency in academic English is an important factor in students' academic success, the distinguishing characteristics of academic English remain debatable (DiCerbo et al., 2014). Beck, McKeown, and Kucan (2002) developed a useful framework for classifying vocabulary. The framework groups vocabulary within three tiers. According to Beck et al. (2002):

> Tier 1 words are the commonly-occurring, basic words of English; these are lexical items that native speakers of a language easily recognize, such as map, uncle, tall, sing, and dog. Tier 2 words are academic vocabulary and other lexical items which appear frequently across a variety of domains. Words such as coincidence, industrious, and investigate fall into this category. Tier 2 words are typically essential for understanding the meaning of a text. Finally, Tier 3 words are low frequency words such as amoeba, isotope, or lathe, which are often discipline-specific. (p. 11)

Purposeful academic conversations with sustained dialogue about school-related topics are the cornerstone for building literacy and learning (Gottlieb, 2016).

Academic English development. Many educators are aware of the importance of academic achievement for all students but may not realize that academic language development is a key component in that process. Academic language development refers to the course of "acquiring and using different genres across the content areas and within those discourses, possessing the necessary language structures, words, and expressions required to process understand, interpret, and communicate curriculum-based content" (Gottlieb, 2016, p. 42). For English language learners, acquiring fluency in academic English can prove to be a particularly difficult task. This is partially due to a lack of exposure to the "norms and patterns of language as it is used within and across academic disciplines" (DiCerbo et al., 2014, p. 446). The language of school revolves around students "collaborating with one another, actively engaging in learning, and pursing inquiry that spurs higher-order thinking" (Gottlieb, 2016, p. 94). To facilitate academic language development, teachers must promote a myriad of student discourse and continuous use of academic language across the disciplines wherever possible in the languages of their students.

Language proficiency standards. As the age of accountability caused states to focus on the success of English learners, Teaching English to Speakers of Other Languages (TESOL), an organization focusing on the development of English language learners, developed language proficiency standards. These standards have become the bedrock for programs serving ELs in the United States. Developed on the premise that effective education for English language learners includes native-like levels of proficiency in English, these standards are intended for all educators in PreK–12 settings. Table 3 details the five standards for English language proficiency developed by the TESOL organization and widely adopted across the United States.

Table 3

PreK–12 English Language Proficiency Standards in the Core Content Areas

Standard Number	Description
Standard 1	English language learners communicate for **social**, **intercultural**, and **instructional** purposes within the school setting.
Standard 2	English language learners communicate information, ideas, and concepts necessary for academic success in the area of **language arts**.
Standard 3	English language learners communicate information, ideas, and concepts necessary for academic success in the area of **mathematics**.
Standard 4	English language learners communicate information, ideas, and concepts necessary for academic success in the area of **science**.
Standard 5	English language learners communicate information, ideas, and concepts necessary for academic success in the area of **social studies**.

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Language Proficiency Assessments

Until the 1990s, English language proficiency assessments were primarily "commercially available tests that assisted local decision making in program implementation and monitoring

English language learners in a low-stakes environment" (Boals et al., 2015, p. 125). These tests gained popularity because of their ease of use, but they focused primarily on social English and were not designed to measure students' progress of academic English language attainment (Boals et al., 2015). Within K–12 contexts, researchers have documented how "language proficiency tests potentially misled teachers about students' abilities" (King & Bigelow, 2018, p. 938). Effective language proficiency assessment should reveal the extent of a student's language development, generally expressed as a language proficiency level (Gottlieb, 2016). Unfortunately, many of these commercially-based assessment tools were also "built on a discrete view of language knowledge rather than on second language acquisition theory" (Boals et al., 2015, p. 130). Gaillard and Tremblay (2016) explained that an effective language proficiency assessment provides evidence of validity, reliability, and should be sufficiently global that it does not rely on circular logic by being too similar to the target L2 measure investigated (p. 420).

The most important quality of a test is its usefulness which is comprised of six factors: reliability, construct validity, authenticity, interactiveness, impact, and practicality (Bachman, 1990). While an individual test may vary in degree in the strength of each factor, the primary consideration still remains: "How useful is this test for its intended purpose?" (Bachman, 1990, p. 17). To establish construct validity, or the extent to which a given score can be interpreted as an indicator of the abilities being measured, Bachman (1990) suggested tests be subject to rigorous statistical analyses to (a) determine reliability-the consistency of measurement across testing situations and between different forms of the test, (b) eliminate unproductive items and ineffective distractors, and (c) ensure the full range of the continuum from beginning to above proficient is represented in the difficulty level of items.

To address these concerns, the U.S. Department of Education sponsored grants for researchers to develop assessments that measured the complex language tasks associated with academic English (Boals et al., 2015). Using the English language proficiency standards in place by TESOL, researchers set out to develop a standards-based English proficiency assessment (Boals et al., 2015). This accountability reform pushed measurement of language proficiency into academic contexts (Gottlieb, 2016). These newly created English language proficiency assessments have been essential tools for monitoring "(a) progress in English language acquisition, and (b) the ability to reach full English language proficiency" (Boals et al., 2015, p. 127). Thus, in the last decade, assessment of academic language proficiency has expanded in "scope to measure the language specific to each discipline and content area" (Gottlieb, 2016, p. 27).

LAS Links English Language Proficiency Assessment, Forms A and B, is one example of a NCLB-compliant instrument that is used in kindergarten through Grade 12 as a formal and standardized method of determining language proficiency. The test results provide important information for classifying ELs and subsequently for monitoring their progress in acquiring English ("LAS Links Interpretation Guide," 2005). The assessment measures the competencies necessary for successful academic and social language usage in mainstream classrooms and is aligned to the English Language Learners' learning standards of several states and of TESOL ("LAS Links Interpretation Guide," 2005). From the onset of development, *LAS Links* was written to present material appropriate to each grade with the understanding that language skills and comprehension vary among the grade levels. Additionally, the *LAS Links* common scale as developed and refined with the intention of minimizing the effect of general intellectual maturation and development ("LAS Links Interpretation Guide," 2005). Each of the five grade

spans includes age-appropriate vocabulary, tasks, topics, and artwork while covering a wide variety of contexts for language use in schools—from social interactions with peers to persuasive writing. The tests also utilize a variety of item types, including multiple-choice, constructed response, and open-ended response, which cover the range of five proficiency levels from beginning to above proficient ("LAS Links Interpretation Guide," 2005). While *LAS Links* is a comprehensive series of tests for assessing the English language proficiency skills, it is not the most widely used language proficiency assessment in the United States.

World-Class Instructional Design and Assessment (WIDA)

The World-Class Instructional Design and Assessment (WIDA) consortium was formed in 2003 with federal monies (Teachers of English for Speakers of Other Languages, 2005). Ten states came together to develop comprehensive English language proficiency standards similar to the standards developed by TESOL (Teachers of English for Speakers of Other Languages, 2005). From its conception, the WIDA Consortium envisioned a system of standards and assessments that would assist schools in teaching academic language to English language learners. WIDA (2012) products and services address language proficiency in relation to five English language proficiency standards:

- Social and Instructional Language
- The Language of Language Arts
- The Language of Mathematics
- The Language of Science
- The Language of Social Studies

Currently, WIDA is the leading authority in English language acquisition in American schools. Focusing on the linguistic pathways English language learners need to be successful in

all their academic subjects, WIDA has made significant contributions to state policy and school districts implementation of language support measures (Fairbairn & Jones-Vo, 2010). Teachers in WIDA states are able to find a clear alignment between national language proficiency standards and language proficiency assessments that measure academic language.

ACCESS test. One such assessment is the WIDA ACCESS for English language learners. This assessment was initially developed by the Center of Applied Linguistics in 2005, with the intended purpose to meet the federal requirement of annual assessment measures aligned to language development standards for English language learners established by the No Child Left Behind Act of 2001 (WIDA, 2007). According to Fox and Fairbairn (2011), the WIDA ACCESS exam reflects "current theory and research on academic language" (p. 247) which has been found to be a key indicator of the language proficiency needed by English language learners to be successful in academic settings and on standardized measurements of academic progress. Table 4 defines the performance definitions for the levels of English Proficiency that students can achieve on the ACCESS test. These definitions describe the given level of English language proficiency, and what English learners will process, understand, produce or use.

6 Reaching	• specialized or technical language reflective of the content areas at grade level • a variety of sentence lengths of varying linguistic complexity in extended oral or written discourse as required by the specified grade level • oral or written communication in English comparable to English-proficient peers
5 Bridging	• specialized or technical language of the content areas • a variety of sentence lengths of varying linguistic complexity in oral discourse including stories, essays, or reports • oral or written language approaching comparability to that English-proficient peers when presented with grade-level material
4 Expanding	• specific and some technical language of the content areas • a variety of sentence lengths of varying linguistic complexity in oral discourse or multiple, related sentences, or paragraphs • oral or written language with phonological, syntactic, or semantic errors that do not impede the overall meaning of the communication when presented with oral or written connected discourse with sensory, graphic, or interactive support
3 Developing	• general and some specific language of the content areas • expanded sentences in oral interaction or written paragraphs • oral or written language with phonological, syntactic, or semantic errors that do not impede the overall meaning of the communication when presented with oral or written connected discourse with sensory, graphic, or interactive support
2 Beginning	• general language related to the content areas • phrases or short sentences • oral or written language with phonological, syntactic, or semantic errors that may impeded the communication, but retain much of its meaning, when presented with oral or written, narrative, or expository descriptions with sensory, graphic, or interactive support
1 Entering	• pictorial or graphic representation of the language of the content areas • words, phrases, or chunks of language when presented with one-step commands, directions, WH-, choice, or yes/no questions, or statements with sensory, graphic, or interactive support • oral language with phonological, syntactic, or semantic errors that often impede meaning when presented with basic oral commands, direct questions, or simple statements with sensory, graphic, or interactive support

Figure 1. Performance definitions for the levels of English language proficiency in Grades K–12. Adapted from *The English Language Learner Can Do Booklet: Grades 6–8*, by WIDA Consortium, 2012, Madison, WI: WIDA Consortium. Adapted with permission (see Appendix B).

In North Carolina, students are given the WIDA ACCESS for ELLs 2.0 annually until they score highly enough to be deemed fully English proficient. To be reclassified, students must meet the overall score requirements. An overall score of at least 4.8 out of 6.0 on the ACCESS, with a score of at least 4.0 on the reading domain and at 4.0 on the writing must be reached before students are reclassified as English proficient (Sugarman & Geary, 2018).

English Language Learners and Standardized Assessments

The use of educational tests has risen worldwide (Sireci & Faulkner-Bond, 2015). According to Clark-Gareca (2016), as the No Child Left Behind legislation wanes, "educational accountability is on the rise through the Race to the Top program in support of Common Core State Standards in math and language arts" (p. 139). Traditionally, these assessments were used to "gauge students' academic strengths and weaknesses" (Sireci & Faulkner-Bond, 2015, p. 215); however, the current culture of measurement has changed their purpose. Presently, educational tests are used to "inform educational policy and for holding educators accountable for student learning" (Sireci & Faulkner-Bond, 2015, p. 215). The No Child Left Behind (NCLB) legislation mandated high-stakes testing for all students (Parkay et al., 2014), while the Race to the Top legislation is intended to "make U.S. students more competitive in a newly, global society" (Clark-Gareca, 2016, p. 139). According to Bailey and Carroll (2015), the intended effect of mandating assessment of language learners is to ensure their academic achievement. However, ELs present "particularly difficult challenges to valid measurement" (Sireci & Faulkner-Bond, 2015, p. 215). According to Ardasheva et al. (2012), standardized test scores in reading and mathematics demonstrate the "ELL academic underachievement in comparison to native English-speaking students remains a reality and is often the cause of negative stereotyping regarding English language learners' intellectual abilities" (p. 770).

Although this underachievement is expected for students in their first several years of learning English, concerns about the significant numbers of "long-term English learners, those identified as English learners for six or more years" (Sugarman & Geary, 2018, p. 4) has driven policymakers to strengthen the ways they hold schools accountable for EL outcomes on academic assessments.

English language learners are "children who have been identified to speak a language other than English at home and are eligible for specialized language services in school to further their English language proficiency" (Clark-Gareca, 2016, p. 139). In addition to progress toward proficiency, ESSA requires states to report and include in their accountability systems data on how well ELs are performing on the indicators that apply to all students (Sugarman & Geary, 2018). As noted earlier, ESSA calls for states to identify schools for comprehensive support and improvement based on the performance of all students, including subgroups of students, and for targeted support and improvement for schools that have one or more underperforming subgroups such as ELs. Since students exit the EL subgroup, ESSA allows states to include former ELs within the EL subgroup for up to four years after they exited EL status. According to Sugarman and Geary (2018):

> Unlike other subgroups, ESSA also provides two types of exemption states may choose to apply recently arrived English learners on state standardized tests. In their first year in the United States, English learners can be exempt from taking the English/Language Arts test. They must be tested in math that year, but their scores will not be included in accountability calculations. Regular test-taking and accountability procedures will apply thereafter. English learners may also take English/Language Arts and math tests in their first year, but their scores can be excluded from accountability measures. In the second

> year, outcomes on both tests are reported as a growth score from year one to year two. From their third year on, students are assessed, and their scores included in accountability measures as is done for all students. States also have a third option. They may assign some recently arrived English learners to be exempted from English/Language Arts while others take English/Language Arts and math with their scores being exempt based on characteristics such as their initial English language proficiency level. (p. 7)

North Carolina will include former ELs in their calculation of academic achievement and academic progress indicators. North Carolina's Every Student Succeeds Act plan indicates that ELs take English/Language Arts and math tests in their first year, but their scores will be excluded (Sugarman & Geary, 2018). Many state departments of education in the United States "call upon accommodations implementation in the classroom as a precursor for high-stakes accommodations practice during standardized assessments" (Clark-Gareca, 2016, p. 142).

North Carolina End-of-Grade reading test. The state of North Carolina administers standardized assessments to all students attending public school in Grades 3–12. These tests are designed to assess student progress toward mastering content standards set by the North Carolina Department of Public Instruction. The End-of-Grade reading test was designed to meet the assessment and accountability requirements of the No Child Left Behind Act of 2001 (North Carolina Public Schools, 2015). Under the No Child Left Behind legislation, states were allowed to exempt ELs who were in their first year of school from taking the English/Language Arts test for one year (Sugarman & Geary, 2018). The following results do not include all ELs in North Carolina. Students scoring at Levels 3 through 5 on a 5-point scale are considered to be at or above grade level. Students at Level 4 or Level 5 are deemed college and career ready (Sugarman & Geary, 2018). According to Sugarman and Geary (2018):

> As states move forward with ESSA accountability plans, policymakers are taking the opportunity to revise existing regulations on funding, program requirements, teacher training, and other aspects of school administration. Provisions that affect EL students should be scrutinized closely by stakeholders at all levels, whether parents, teachers, or community organizations. Data on EL demographics and performance, such as those provided in this fact sheet, will prove an important tool in this effort. (p. 8)

Table 4 shows considerable achievement gaps between native speaking students and English learners in the area of reading. The gap was smallest in third grade at just 29 points and largest in sixth grade at 54 points. While the gap is significantly smaller at the lower grades, there is still a large gap between native speakers of English and ELs.

Table 4

Share of North Carolina ELs and All Students at or above Grade Level in Reading (5) by Grade or Course, SY 2016–17

	Grade 3 (%)	Grade 4 (%)	Grade 5 (%)	Grade 6 (%)	Grade 7 (%)	Grade 8 (%)
Share of ELs at or above grade level	28.7	10.3	8.3	7.1	9.0	7.9
Share of all students at or above grade level	57.8	57.7	56.6	61.0	58.2	53.7

Note. Adapted from "Accountability and testing results—2016–17 state, district, and school level drilldown performance data," by North Carolina Department of Public Instruction, 2018, https://www.dpi.nc.gov/districts-schools/testing-and-school-accountability/school-accountability-and-reporting/accountability-data-sets-and-reports. In the public domain.

Biblical Worldview

The treatment of foreigners is an issue God provided clear instruction about in his word. Leviticus 19:33–34 reads, "And if a stranger sojourn with thee in your land, ye shall not vex him. But the stranger that dwelleth with you shall be unto you as one born among you, and thou shalt

love him as thyself; for ye were strangers in the land of Egypt: I am the Lord your God" (King James Version). When families are immigrants to a new country, few "social, economic, or political devices are available for migrants to take and retain control over their transnational trajectories" (Bastide, 2015, p. 241). Deuteronomy 10:17–19 states,

> For the Lord your God is God of gods and Lord of lords, the great God, mighty and awesome, who shows no partiality and accepts no bribes. He defends the cause of the fatherless and the widow, and loves the foreigner residing among you, giving them food and clothing. And you are to love those who are foreigners, for you yourselves were foreigners in Egypt.

God teaches believers to provide aid to immigrant families through social and educational opportunities. Schools have a legal and biblical responsibility to provide students of immigrant families who are non-native speakers of English opportunities to learn the language and content on a level comparable to their native-speaking peers.

Summary

The instructional challenges English language learners have faced in American classrooms has been well documented. The achievement gap that exists between ELs and native English speakers has continued to widen. Through litigation and legislation, their educational rights have been established and protected. Despite this, these instructional struggles were compounded by the mandate to include linguistically and culturally diverse students in accountability measures without a full understanding of how to measure the language proficiency needed to be successful on those measures. Many commercially produced language proficiency exams focus on social English instead of academic English, yet academic English is the language used in schools to acquire content specific knowledge.

A gap in the literature exists in the area of equitably addressing the assessment challenges and needs of students identified as English language learners. It is also unclear if performance outcomes on language proficiency assessments provide an accurate picture of the level of academic English necessary for English language learners to be successful on standards-based reading assessments. This gap in the literature demonstrates the need for empirical research in this area. The goal of this quantitative study was to fill this research gap and provide researchers, educational policymakers, assessment designers, and educators with improved strategies to assist English language learners.

CHAPTER THREE: METHODS

Overview

In this chapter, the research methods and procedures used to conduct this study are explained. The framework of research and study analysis is detailed for study replication or further validation of the data provided. The purpose of the quantitative study was to test the relationship of students' scores on the WIDA ACCESS test to their score on the North Carolina End-of-Grade Test in the area of reading. The study also assessed the predictive power of the WIDA ACCESS test on the North Carolina End-of-Grade test for English language learners. An ex-post facto, correlational design was used in the study (Gall, Gall, & Borg, 2007). This allowed existing data to be examined to determine the extent of the correlation between English language proficiency levels and reading performance of fifth-grade English language learners in North Carolina. The independent variable is defined as the student's overall score on the WIDA ACCESS test. The dependent variable is defined as the student's reading score on the North Carolina End-of-Grade test. It is hypothesized that the WIDA ACCESS test will be found to be a strong predictor of the North Carolina End-of-Grade test in reading. Having predictive data for teachers to use as language learners begin the school year in their classes will assist teachers as they plan interventions to be implemented throughout the school year. This data can also assist school systems as they allocate resources for support services such as English for Speakers of Other Languages (ESOL) teachers, reading support, test accommodations, and curriculum planning.

Design

A quantitative, ex-post facto, correlational design was used to examine any potential relationships between student scores on the WIDA ACCESS test for fifth-grade students

measuring language proficiency and their scores on the North Carolina End-of-Grade fifth-grade reading test. According to Gall et al. (2007), ex-post facto research designs rely on observation of relationships "between naturally occurring variations in the presumed independent and dependent variables" (p. 306). Correlational studies employ a simplistic design with the purpose of searching for variables, "measured at one point in time, that predict a criterion variable measured at a subsequent point in time" (Gall et al., 2007, p. 331). Additionally, correlational studies search for a causal relationship between variables, providing statistically data that can be used to "estimate the strength of the predication or relationship" (Gall et al., 2007, p. 331).

The WIDA ACCESS test was administered in January of the 2018–2019 school year. The North Carolina End-of-Grade reading test was administered in May of the 2018–2019 school year. Students' 2018–2019 WIDA ACCESS test score measuring proficiency in listening, speaking, reading, and writing will be compared to students' scores on the 2018–2019 North Carolina End-of-Grade reading test which measures reading for literature, informational text, and foundational skills, writing, speaking, listening, and language. This study sought to observe if a relationship existed between language proficiency as measured by the WIDA ACCESS test and academic achievement as measured by the North Carolina End-of-Grade reading test in fifth-grade English language learners. The use of Pearson correlations was used along with a bivariate linear regression to measure the degree of relationship between two variables and to determine if a predictive relationship could be identified (Gall et al., 2007).

Research Questions

RQ1: Is there a relationship between English language proficiency as measured by the WIDA ACCESS English Language Proficiency Exam and academic achievement as measured by the fifth-grade North Carolina End-of-Grade Reading Test?

RQ2: Is there a statistically predictable relationship between WIDA ACCESS English Language Proficiency Exam (predictor variable) and the fifth-grade North Carolina End-of-Grade Reading Test (the criterion variable), as measured by student attainment of language proficiency Level 4 (Expanding), Level 5 (Bridging), or Level 6 (Reaching) on the WIDA ACCESS English Language Proficiency Exam?

Hypotheses

$H_0$1: There is no statistically significant correlation between English language proficiency as measured by the WIDA ACCESS English Language Proficiency Exam and academic achievement as measured by the fifth-grade North Carolina End-of-Grade reading test.

$H_0$2: There is no statistically significant predictable relationship between language proficiency (predictor variable) as measured by the WIDA ACCESS English Language Proficiency Exam and academic achievement in literacy (criterion variable) as measured by the fifth-grade North Carolina End-of-Grade reading test for students with an attainment of language proficiency Level 4 (Expanding), Level 5 (Bridging), and Level 6 (Reaching).

Participants and Setting

Demographics

The participants for this study were both male and female elementary English language learner students in fifth grade. Convenience sampling was used to select from a pool of fifth-grade students designated as English language learners with a WIDA ACCESS score for the 2018–2019 school year. According to Gall et al. (2007), researchers often need to select a convenience sample or "face the possibility that they will be unable to do the study" (p. 175). The sample was drawn from fifth-grade English language learner students in Wisdom Public Schools (pseudonym), a suburban school district in North Carolina.

In order to be included in the convenience sample, students needed to have fifth-grade reading scores in the North Carolina End-of-Grade test and WIDA ACCESS scores from the 2017 test administrations. Within Wisdom Public Schools, 102 students had the above criteria in their assessment file. For a medium effect of correlation coefficient *r*, a minimum sample size of 66 was needed at an alpha level of .05 and statistical power of .7 (Gall et al., 2007, p. 145).

The sample population that was included in this study consisted of 102 fifth grade English language learners; 56 male participants and 46 female participants from the 2017–2018 school year will be included in the study. The ethnicities represented in the sample population consisted of 65 Hispanic or Latino, 17 Asian, three Hawaiian or Pacific Islander, four White, nine Black or African American, and three American Indian or Alaskan Native students.

Instrumentation

The predictor variable, language proficiency, was measured by scores on the WIDA ACCESS language proficiency test. The ACCESS for English language learners assessment was initially developed by the Center of Applied Linguistics in 2005, with the intended purpose to meet the federal requirement of annual assessment measures aligned to language development standards for English language learners established by the No Child Left Behind Act of 2001 (WIDA, 2007). Administered annually, ACCESS assesses the four domains of language: listening, speaking, reading, and writing. Language learners designated as Level 1 and Level 2 students take Tier A of the ACCESS test. Language learners designated as Level 3, Level 4, and Level 5 take Tier B or Tier C of the ACCESS test. The ACCESS test is used to monitor students' progress in learning academic English. In order to administer the ACCESS test, teachers must complete an online training module and obtain a certificate of completion through passing a quiz every three years. The training module is prepared and provided by WIDA. Once

teachers complete the training modules, they are able to administer the ACCESS test in an online or paper format. Teachers who are certified to teach language learners such as ESOL teachers generally complete the training and administer the exam.

In order to reflect internal consistency in the categorization of the data, a single reliability estimate was calculated across three tiers. For the domains, this was a weighted reliability estimate (Cronbach's alpha). According to Gall et al. (2007), Cronbach's alpha coefficient is a "general form of the K-R 20 formula that can be used when items on a measure are not scored dichotomously" (p. 202). Reliability for the fifth-grade language subtest using Cronbach's alpha is as follows per tier: Tier A = 0.838, Tier B = 0.805, and Tier C = 0.748. Tier A includes proficiency levels 1.0 to 4.0; Tier B includes proficiency levels 2.0 to 5.0; and Tier C includes proficiency levels 3.0 to 6.0. All scoring for the listening, reading, and writing domains for Grades 1–12 is completed by trained scorers and raters at the testing company. Scores range from low (1.0) to high (6.0). The ranges identify the proficiency levels. Each proficiency level performance band contains a range of scale score which provide a more detailed analysis of the student's proficiency level. Reliability data is provided for in numerous reports on the WIDA website. This data reflects that ACCESS for English language learners has been piloted, field tested, and reviewed for each performance-based activity to ensure that students are assessed on the standards. The test reflects "current theory and research on academic language" (Fox & Fairbairn, 2011, p. 427) which has been found to be a key indicator of the language proficiency needed by English language learners to be successful in academic settings and on standardized measurements of academic progress.

The dependent variable, academic achievement, was measured by the North Carolina End-of-Grade reading test for fifth grade. The fifth-grade Reading EOG is an exam given at the

end of the fifth-grade school year to measure student achievement of the NC reading standards for that year. Prior to administering the test, teachers must complete a training focused on testing procedures conducted by the test coordinator in their school building. All certified teachers are eligible to administer the EOG. It is typically administered by the students' fifth-grade teacher unless they receive testing accommodations such as extended time and separate setting.

The fifth-grade Reading EOG was designed to meet the assessment and accountability requirements of the No Child Left Behind Act of 2001. The reliability for the fifth-grade Reading EOG as calculated by Cronbach's coefficient alpha are 0.90 (Form A); 0.88 (Form B); 0.89 (Form C). The assessment scores range for 0–500. The range of scores for each level yielded the following sorts: Level 1 (0–442), Level 2 (443–449); Level 3 (450–452), Level 4 (453–463), and Level 5 (464–500; North Carolina Public Schools, 2015). Table 5 shows the weight distributions for the strands measured by the North Carolina End-of-Grade reading test in Grades 3–5.

Table 5

Weight Distributions for Grades 3–5

Strand	Grade 3	Grade 4	Grade 5
Reading for Literature	38–42%	38–42%	38–42%
Reading for Informational Text	46–50%	46–50%	46–50%
Reading for Foundational Skills	N/A	N/A	N/A
Writing	N/A	N/A	N/A
Speaking and Listening	N/A	N/A	N/A
Language	13–15%	13–15%	13–15%
Total	**100%**	**100%**	**100%**

Note. Adapted from "North Carolina Testing Program Technical Report," by North Carolina Public Schools, 2020, https://files.nc.gov/dpi/documents/files/test-specifications-eog-reading-2020-02-11_1.pdf. In the public domain.

Procedures

Once the research was approved by the research committee, permission was requested from the Wisdom Public School district through their office of data and accountability. Once approval from the Wisdom Public School district was awarded, permission was requested from the Institutional Review Board (IRB) at Liberty University. Following IRB approval (see Appendix C), the researcher requested data from Wisdom Public School district. The requested data was disaggregated by student WIDA level (which is synonymous with their score on the WIDA ACCESS exam) and their score on the fifth-grade Reading End-of-Grade test.

Participants were selected from fifth-grade students who had been identified as English language learners with WIDA designated language proficiency levels 1–6. These students also needed to have a score on the fifth-grade Reading EOG test for the 2017–2018 school year. Each data file had all personally identifiable information removed such as first names, middle names, last names, identification numbers, and birth dates. The researcher asked for these nomenclatures to be removed and to place students in numerical order. The latest version of SPSS software was used to analyze the data.

Data Analysis

This quantitative study utilized the Pearson product-moment correlation model to determine if a relationship exists between language proficiency as measured by the WIDA-ACCESS language proficiency exam and academic achievement at measured by the North Carolina fifth-grade Reading End-of-Grade test. The Pearson product-moment correlation determined the strength and direction of a linear relationship between the continuous variables of language proficiency and academic achievement. This statistical analysis generated a coefficient

known as the Pearson correlation coefficient, denoted as *r*, and is computed when "both variables have continuous scores" (Gall et al., 2007, p. 347). It also has a small standard, making it the "most widely used bivariate correlational technique" (Gall et al., 2007, p. 347) used in educational studies. In this study, the ACCESS language proficiency exam and the fifth-grade Reading EOG were administered to the same set of students and yielded continuous scores.

The second null hypothesis was addressed using a regression analysis. According to Warner (2013), a regression analysis that includes more than one predictor variable can provide answers to several different kinds of questions. A bivariate linear regression model, commonly known as linear regression, indicates the correlation between a criterion variable and a predictor variable (Gall et al., 2007). The linear regression analysis was used to determine if WIDA ACCESS test scores could predict a passing score (4 or 5) on the North Carolina End-of-Grade test. Assumption of bivariate outliers screening was conducted on the variables WIDA ACCESS score and NC EOG score. Bivariate correlational analysis requires that the assumption of linearity and bivariate normal distribution is met. Linearity was examined using a scatterplot with a line of best fit. The assumption of bivariate normal distribution was examined using another scatterplot. Since no violation was found, the assumption of bivariate normal distribution was met. Outliers were identified using a box-and-whisker plot. Additional screening was conducted to ensure entry errors and missing data were identified and addressed.

CHAPTER FOUR: FINDINGS

Overview

Bailey and Carroll (2015) asserted that the intended effect of mandating assessment of language learners is to ensure their academic achievement. However, there are few studies that examine if performance outcomes on language proficiency assessments provide an accurate picture of the level of academic English necessary for English language learners to be successful on standards-based reading assessments. The purpose of this study was to determine if a relationship exists between English language proficiency as measured by the ACCESS Exam and academic achievement in reading as measured by the fifth-grade North Carolina End-of-Grade test. For the purpose of this study, English language proficiency, the predictor variable, is defined as the student's ability to communicate in English in academic settings; English language proficiency was measured using WIDA's ACCESS exam. Academic achievement, the criterion variable, is defined as the students' ability to utilize literacy skills and demonstrate proficiency on standardized assessments. Academic achievement was measured using the fifth-grade North Carolina End-of-Grade (EOG) test in reading.

Research Questions

The research questions for this study were as follows:

RQ1: Is there a relationship between English language proficiency as measured by the WIDA ACCESS English Language Proficiency Exam and academic achievement as measured by the fifth-grade North Carolina End-of-Grade Reading Test?

RQ2: Is there a statistically predictable relationship between WIDA ACCESS English Language Proficiency Exam (predictor variable) and the fifth-grade North Carolina End-of-Grade Reading Test (the criterion variable), as measured by student attainment of language

proficiency Level 4 (Expanding), Level 5 (Bridging), or Level 6 (Reaching) on the WIDA ACCESS English Language Proficiency Exam?

Null Hypotheses

The null hypotheses for this study were as follows:

$H_0$1: There is no statistically significant correlation between English language proficiency as measured by the WIDA ACCESS English Language Proficiency Exam and academic achievement as measured by the fifth-grade North Carolina End-of-Grade Reading Test.

$H_0$2: There is no statistically significant predictable relationship between language proficiency (predictor variable) as measured by the WIDA ACCESS English Language Proficiency Exam and academic achievement in literacy (criterion variable) as measured by the fifth-grade North Carolina End-of-Grade Reading Test for students with an attainment of language proficiency Level 4 (Expanding), Level 5 (Bridging), Level 6 (Reaching).

Descriptive Statistics

To draw conclusions from the sample population included in this study, descriptive statistics were used. Data analysis was conducted using the statistical software SPSS, version 27. Mean, standard deviation, and range were analyzed for the variables. Pearson's product-moment correlation was used to determine correlation coefficients. Scatterplots, histograms, and box plots were generated using SPSS. The research questions were addressed using correlation analysis tested to a significance level of 0.05.

Table 6

Variables and Statistical Tests Used to Examine Research Questions One and Two

Research Question	Criterion Variable	Predictor Variable	Statistical Test	Significance
1	North Carolina EOG reading score	ACCESS language proficiency level	Pearson Product-Moment Correlation	≤ 0.001
2	North Carolina EOG reading level	ACCESS language proficiency level	Bivariate Regression	≤ 0.001

The null hypotheses for this study were addressed using Pearson's product-moment correlation analysis and a bivariate linear regression. For $H_0$1, the significance of the relationship between the North Carolina EOG reading exam performance and ACCESS language proficiency exam performance was analyzed using Pearson's product-moment correlation. For $H_0$2 a bivariate linear regression model was used to determine if a student's ACCESS proficiency level predicted the student's performance on the North Carolina EOG reading exam. The criterion variable for $H_0$1 was the North Carolina EOG reading score. The predictor variable for $H_0$1 was the ACCESS language proficiency exam score. The criterion variable for $H_0$2 was the North Carolina EOG reading exam score.

Scores for the fifth-grade North Carolina EOG reading exam are reported as a scale score. The scale score range on the North Carolina EOG for this sample population is 423 to 460. Scale scores are translated to reading levels. Reading levels can range from l–5. A scale score of ≤442 is translated to a Reading Level 1. Scale scores between 443–449 are translated as a Level 2. Scale scores between 450–452 are translated as a Level 3. Scale scores between 453–463 are translated as a Level 4. Scale scores ≥464 are translated as a Level 5. Students who

scored at Levels 1 or 2 “have a limited or partial understanding of the content that was taught and will likely need academic support at the next grade level” (Wake County Public Schools, 2020). A student with a Reading Level 3 is “considered to be proficient and prepared for the next grade level but may need additional academic support to successfully understand the content that will be covered in the next grade” (Wake County Public Schools, 2020). Students with a Level 4 or 5 are “not only proficient but they are also considered to be well-prepared academically” (Wake County Public Schools, 2020).

Scores for the ACCESS English language proficiency exam are reported as scale scores. The scale scores are translated into proficiency level. For this sample population, the researcher was only provided with the proficiency level. The range of proficiency levels for the sample population was 1.60 – 6.00.

In order to examine the consistency of the data, the mean, standard deviation, and range were analyzed. The data were found to be consistent and are evidenced by the standard deviation remaining consistent among the variables. This is illustrated in Table 7.

Table 7

Mean, Standard Deviation, and Range for Variables Collected

Variable	*M*	*SD*	Range	
			Min	Max
North Carolina EOG Reading Scale Score	439.66	9.14	423	460
ACCESS English Proficiency Level	3.64	1.05	1.60	6.00
North Carolina EOG Reading Level for Level 4 ELL	445.04	7.14	431	454

North Carolina EOG Reading Level for Level 5	451.25	7.44	437	460
North Carolina EOG Reading Level for Level 6	452.50	2.12	451	454

The descriptive statistics of the bivariate regression model are shown in Table 8. The descriptive statistics include the mean, standard deviation, and *N*-size of the sample population included in the statistical analysis.

Table 8

Mean, Standard Deviation, N-size of North Carolina EOG Reading Level and ACCESS Proficiency Level

	M	*SD*	*N*
North Carolina EOG Reading SS	439.66	9.14	97
ACCESS English Proficiency Level	3.64	1.05	97
English Proficiency Level 4	`445.04	7.14	25
English Proficiency Level 5	451.25	7.44	8
English Proficiency Level 6	452.50	2.12	2

Results

Null Hypothesis One Screening and Assumption Tests

Data screening. The data was screened for univariate outliers and missing data. The data provided was stripped of all personally identifiable information and screened for all missing data and outliers. Univariate outliers were present for the ACCESS assessment data set. These

student records were not included in the data analysis, resulting in five student records being removed prior to the analysis.

Assumptions testing. Assumption testing was conducted to ensure Pearson's product-moment correlation was the appropriate analysis for this data set. The first two assumptions of Pearson's product-moment correlation were met as the variables were continuous and paired. The variables were assessed for linearity, bivariate normality, and homoscedasticity.

Test for linearity. Figure 2 shows the results of the linearity test for the variables of English proficiency level and North Carolina EOG scale score. The assumption for linearity was met due to the linear movement of the data along the line of best fit (Warner, 2013). There were no outliers. The data displays a classic cigar shape meeting the assumption for normality.

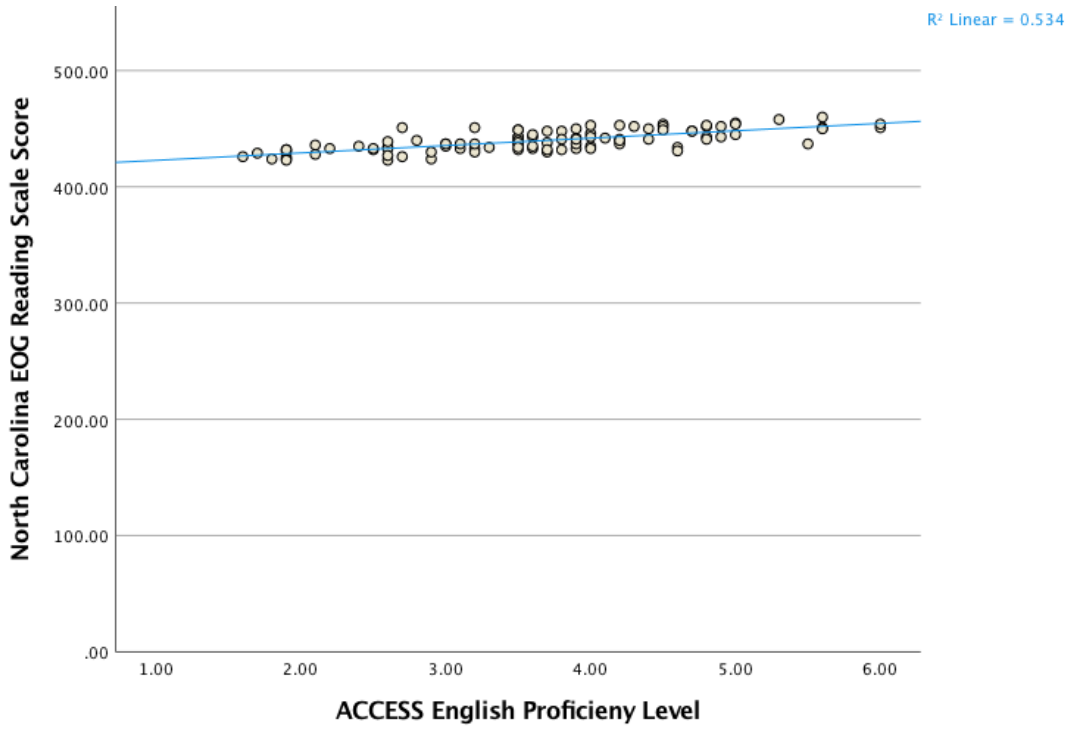

Figure 2. Test for linearity.

Null Hypothesis Two Screening and Assumption Tests

Data screening. The data was screened for univariate outliers and missing data. The data provided was stripped of all personally identifiable information and screened for all missing data and outliers. Univariate outliers were present for the ACCESS assessment data set. These student records were not included in the data analysis, resulting in five student records being removed prior to the analysis.

Assumptions testing. Assumption testing was conducted to ensure a bivariate linear regression was the appropriate analysis for this data set. The first two assumptions of the bivariate linear regression were met as the variables were continuous and paired. The variables were assessed for linearity and bivariate normality.

Bivariate normal distribution. Figure 3 provides evidence that the data points for both the North Carolina EOG reading scale scores and the English proficiency levels of Level 4, Level 5, and Level 6 are evenly distributed along the line of best fit. The sample population assumption test confirms that random variables and extreme outliers are absent. While the figure does show that the data suffers slightly from negative kurtosis, the assumption test for normality was met (Warner, 2013).

Bivariate outliers. To this assumption a scatterplot was used as seen in Figure 4. There was homoscedasticity, as assessed by the visual inspection of the scatterplot of standardized residuals versus standardized predicted values. A case where the standard residual is greater than ±3 standard deviations will be highlighted in a Casewise Diagnostics table. Since all cases had a standardized residual of less than ±3, the table was not produced as part of the SPSS output. There were no extreme outliers in this data set.

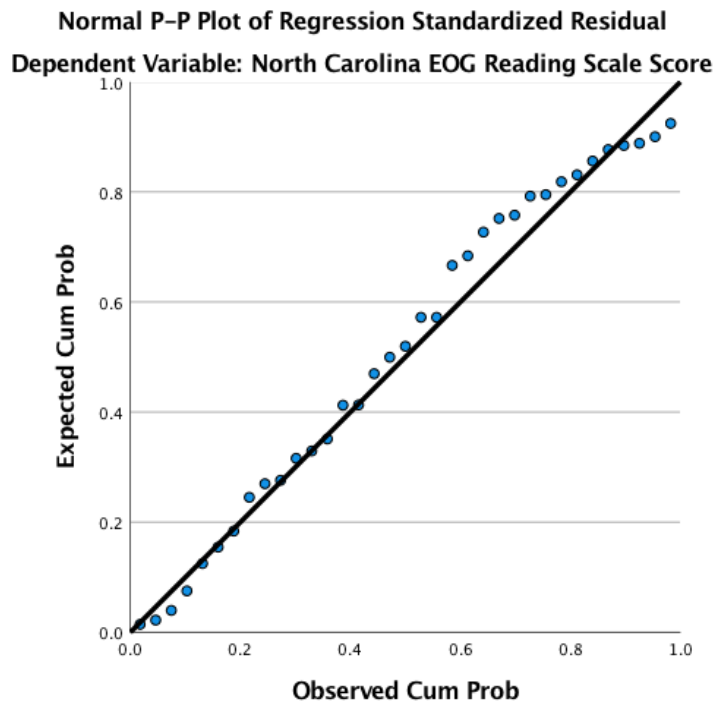

Figure 3. Scatterplot of distribution of North Carolina EOG reading scores and English Proficiency Level Attainment of Level 4, Level 5, and Level 6.

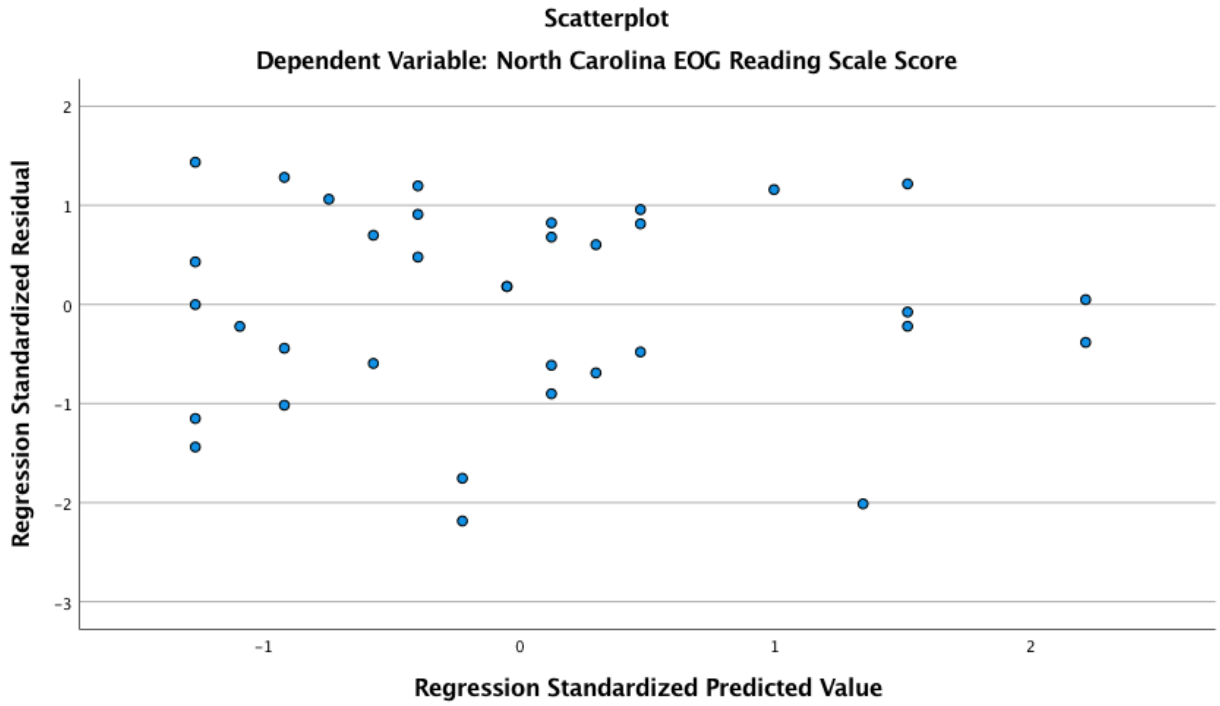

Figure 4. Scatterplot of North Carolina EOG reading scale score by English language learners with English Proficiency Levels of 4, 5, or 6.

Results for Null Hypothesis One

Null Hypothesis One stated, "There is no statistically significant correlation between English language proficiency as measured by the WIDA ACCESS English Language Proficiency exam and academic achievement as measured by the fifth-grade North Carolina End-of-Grade Reading Test." Assumption tests were satisfied. A Pearson product-moment correlation in the statistical software SPSS version 27 was run to test the null hypothesis.. There was a statistically significant difference, a strong positive correlation between fifth-grade ELL students' academic achievement scores in reading and language proficiency scores, $r(35) = +.731$, $p < 0.001$ (see Table 9). Therefore, the null hypothesis was rejected.

Table 9

Correlational analysis of NC EOG Reading Exam and ACCESS English Language Exam

Variable	Pearson correlation	Sig. (2-tailed)	*N*
North Carolina EOG Reading Scale Score and ACCESS English language proficiency scores	.731	0.000	97

Results for Null Hypothesis Two

Null Hypothesis Two stated, "There is no statistically significant predictable relationship between language proficiency (predictor variable) as measured by the WIDA ACCESS English Language Proficiency Exam and academic achievement in literacy (criterion variable) as measured by the fifth-grade North Carolina End-of-Grade Reading Test for students with an attainment of language proficiency Level 4 (Expanding), Level 5 (Bridging), Level 6 (Reaching)." A bivariate linear regression was run to test this null hypothesis. The regression model is statistically significant, $F(1, 33) = 6.570$, $p < 0.05$. The regression equation for predicting overall academic achievement is $Y_{\text{academic achievement}} = 5.326X_{\text{language proficiency score}} +$

421.70. The 95% confidence interval of this slope is 1.09 to 9.55. Table 10 provides a summary of the regression analysis for the variable predicting overall academic achievement in reading scores. Accuracy in predicting academic achievement, $R = 0.407$, is weak. A student's language proficiency score accounted for 14.1% of the explained variability in overall North Carolina EOG reading exam scale scores.

Table 10

Coefficients

Model	*B*	*SE B*	*ß*
Constant	421.70	9.89	
Language Proficiency Score	5.326	2.08	.407

Note. Dependent variable: Academic Achievement Score $R^2 = .141$ ($p < 0.05$)

The ANOVA output shown in Table 11 below noted the significance value of .015 which meant that there was a statistically significant relationship between academic achievement as measured by the fifth-grade North Carolina EOG reading test performance and English Proficiency Levels 4 (Expanding), 5 (Bridging), and 6 (Reaching). The results show sufficient evidence to reject the null hypothesis and conclude that language proficiency scores ($M = 4.71$, $SD = 0.57$) did significantly predict academic achievement ($M = 446.69$, $SD = 7.49$), $F(1, 33) = 6.570$, $p < 0.05$.

Table 11

ANOVA[a]

Model		Sum of Squares	*df*	Mean Square	*F*	Sig.
1	Regression	318.050	1	318.050	6.570	.015[b]
	Residual	1597.493	33	48.409		

Total	1915.543	34

[a]Dependent Variable: North Carolina EOG Reading Scale Score
[b]Predictors: (Constant), English Proficiency Level (ACCESS)

Summary

This study examined the performance of 97 fifth-grade English language learners on the North Carolina EOG reading exam and ACCESS English language proficiency exam administered during the 2018–2019 school year. The study set out to determine if there was a relationship between student performance on the North Carolina EOG reading exam and the ACCESS English language proficiency exam. Additionally, the study set out to determine if there was a predictive relationship between ELLs who achieved an English proficiency level of 4 (Expanding), 5 (Bridging), and 6 (Reaching).

An assumption test was performed to ensure that the data were found to be consistent. Histograms and Shapiro-Wilk tests were performed to observe normality, skewness, and kurtosis on the data. Homoscedasticity and linearity were assessed by scatterplots. Minor violations of normality were determined to be due to the sample size. Both Null Hypothesis One and Null Hypothesis Two were rejected.

CHAPTER FIVE: CONCLUSIONS

Overview

The theoretical framework used for this study was Cummins' (1979) threshold hypothesis. Cummins (1979) hypothesized there are thresholds of language proficiency that dictate a language learners' ability to demonstrate mastery in the target language. Social English and academic English have these thresholds embedded in their concepts creating a clear difference in the acquisition of conversational and academic language. Language learners must reach a minimum threshold of language proficiency in order to have recognizable mastery of the target language. As evidenced by the data this study rendered, as English language proficiency scores increased so did student academic achievement on the North Carolina EOG in reading.

Discussion

This study yielded results that support both hypotheses. The results from the study demonstrated there was a significant relationship between academic achievement as measured by the North Carolina EOG reading test and language proficiency as measured by the WIDA ACCESS exam for fifth-grade English language learners. The relationship between academic achievement and language proficiency tested at a significance of $p < 0.001$. This indicates that the strength of the relationship the results yielded had a low probability of occurring by chance. The Pearson correlation coefficient $r = .731$ indicates a large and robust positive relationship between academic achievement and language proficiency for fifth-grade students.

The results of the study supported the second hypothesis as well. The study showed there is a predictive relationship between language proficiency and academic achievement. The bivariate regression model showed a predictability percentage of 16.6%. There was a significant predictive relationship between fifth-grade English language learners with a language

proficiency of level of 4 (Expanding), 5 (Bridging), and 6 (Reaching) as measured by the ACCESS English and their performance on the North Carolina EOG reading test in Wisdom Public Schools (pseudonym).

The primary finding of this study related to English language learners and their performance on the fifth-grade North Carolina EOG reading exam is that there is a statistically significant relationship between academic achievement and language proficiency. Cummins' (1979) threshold hypothesis is supported by these findings. Along with Cummins' (1979) threshold hypothesis, Chomsky's (1965) formal language theory indicated a distinction between social and academic English. As discussed in the literature review in Chapter Two, Cummins (1979) and Chomsky (1965) described the importance of the impact academic English proficiency has on the academic achievement of English language learners.

Historically, language proficiency exams focused on social English proficiency. Cummins (1979) explained that social English, also known as Basic Interpersonal Communication Skills (BICS), is often acquired within two years, while academic English, also known as Cognitive Academic Language Proficiency (CALP), takes significantly longer to acquire. Prior to the No Child Left Behind legislation, English learners were assessed using "commercially-based" (Boals et al., 2015, p. 125) exams that focused on social English. However, as legislation changed and standardized testing raised the stakes for educational agency, the need for language proficiency exams to accurately measure English learners' attainment of academic English became more apparent. To meet this need, WIDA (2012) developed the ACCESS language proficiency exam with a focus on assessing cognitive academic language proficiency. The findings of a statistically significant relationship between fifth-grade English learners' language proficiency as measured by the ACCESS exam and their

performance on the North Carolina EOG reading exam confirms Cummins' (1979) theory of a necessary threshold of proficiency in the target language to be reached before students can demonstrate measurable academic achievement. The predictive nature of the English learners' performance on the ACCESS exam in relationship to their performance on the North Carolina EOG exam implies that the ACCESS exam is an accurate measure of English learners' attainment of cognitive academic language proficiency.

Implications

Formed in 2003, the WIDA consortium began as a partnership between 10 states. Today the consortium has grown to over 40 member states, territories, and federal agencies (WIDA, 2012). Once a state becomes a member of the WIDA consortium, they agree to use WIDA training and assessment materials exclusively. Training in the use of these materials for administrators and teachers who work with English language learners is exclusively provided by WIDA, creating a costly investment for educational agencies. The analysis shown in the current research study implies that while becoming a member of the WIDA consortium is costly, the materials produced by the consortium provide an accurate assessment of English learners' language proficiency of academic English. This has a direct implication for policymakers who procure testing materials for educational agencies.

Limitations

The first limitation of the study is that the focus is solely on the academic achievement of current English language learners. This subgroup of students changes as students' proficiency levels change. Once a student is deemed fully proficiency in English, they are exited from the English language learners' programs and their classification changes. In order to provide a more

accurate picture of Cummins' threshold hypothesis, the study should be expanded to include former English language learners.

The second limitation of the study is that the focus was only on fifth-grade English language learners. This is a narrow focus that restricts the implications of the relationship between the ACCESS language proficiency exam and the North Carolina EOG because the curriculum standards change by grade level. In order to provide a more comprehensive view of the relationship between the ACCESS language proficiency exam and the North Carolina EOG, other grade levels should be include in the data set.

The third limitation of the study is that it does not consider additional factors that impact academic achievement. The length of years English learners have received services and the quality of instruction students receive are examples of those factors. In order to provide a richer context for the relationship between language proficiency and academic achievement, these factors should be added as variables for the study.

Recommendations for Future Research

The data analysis for this study established confirmation of the relationship between language proficiency as measured by the ACCESS exam and academic achievement as measured by the North Carolina EOG. Future research should be replicated on datasets from multiple academic years to establish longitudinal support for the ACCESS language exam's ability to measure cognitive academic language proficiency. Additionally, data analysis should be expanded to include additional content areas. The current study focused on academic achievement in the area of reading. By examining English learners' academic achievement in mathematics, science, and social studies, validity of the relationship between the two exams

would be deepened. This would provide a wider context to inform instructional practices and policy decisions.

Conclusion

English language learners are a student subgroup that has continued to grow. More and more students are entering American schools speaking languages other than English. In the environment of high-stakes assessments, ensuring that this subgroup of students attains academic achievement is a matter of urgency. This study examined the relationship between language proficiency and academic achievement. Language proficiency as measured by the ACCESS language proficiency exam and academic achievement as measured by the North Carolina EOG were the focus of the hypotheses in this study.

The sample student population consisted of fifth-grade English language learners in Wisdom Public Schools (pseudonym), a suburban school district in North Carolina. A Pearson correlation model demonstrated a statistically significant relationship between language proficiency and academic achievement. A bivariate regression model found that language proficiency has a predictable relationship between the two variables. These findings support the idea that there is a clear distinction between social and academic English. Language proficiency exams should measure proficiency in terms of English learners' attainment of cognitive academic language proficiency. The WIDA ACCESS exam is one such example of a language exam that meets the criteria. As educational agencies procure resources and materials for English language learners, grounding those decisions in research similar to this study would work to close the achievement gap experienced by these learners.

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Standard 5	English language learners communicate information, ideas, and concepts necessary for academic success in the area of **social studies**.

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Title: Examining the Relationship between Academic Achievement and English Language Proficiency
Creation Date: 2-13-2020
End Date:
Status: Approved
Principal Investigator: Cynthia Hyacinth
Review Board: Research Ethics Office
Sponsor:

Study History

Submission Type Initial	Review Type Exempt	Decision No Human Subjects Research

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