

A QUANTITATIVE STUDY OF THE IMPACT OF IMAGINE LEARNING ON THIRD
GRADE ENGLISH LEARNERS ENGLISH AND READING PROFICIENCY

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University of Missouri-Kansas City, 2022

ABSTRACT

Reading on grade level by the close of third grade has been shown to impact a student's chance to graduate on time and therefore impacting future success. English learners (ELs), however, have struggled to read on grade level by the close of third grade as compared to their English-speaking peers. This quasi-experimental study determined if an adaptive software intervention program, Imagine Learning Language and Literacy (IL), implemented in a Midwestern urban school district, resulted in higher levels of English language proficiency and reading achievement for those third grade ELs who utilized the intervention. Split plot ANOVA and t-tests were employed in examining the impact IL had on ELs English language proficiency, as well as reading proficiency. T-tests and split-plot ANOVA determined that IL had a significant impact on ELs' English proficiency as determined by performance on their first and third grade English language proficiency reading scores; yet there was not a significant impact between the experimental and control groups. Furthermore, the findings determined that utilizing Imagine Learning had no impact on ELs' third grade state assessment reading scores. However, there were contributing factors impacting the results of the study.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the School of Education have examined a dissertation titled “A Quantitative Study of the Impact of Imagine Learning on Third Grade English Learners’ English and Reading Proficiency,” presented by Kristen K. Scott, candidate for the Doctor of Education degree, and certify that in their opinion it is worth of acceptance.

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CHAPTER 1

INTRODUCTION

The ability to read is fundamental to participating in society. To function in everyday life, one must have the ability to read and comprehend a variety of texts. Literacy impacts individuals' employment, overall health, and poverty rates (Diallo, 2020). Literacy is seen as the gatekeeper for the future success of individuals as well as American society. According to one report, "students who cannot read proficiently are especially unlikely to obtain a post-secondary degree, which is necessary for the kind of jobs that make American globally competitive in the age of information and communications technology" (Fiester, 2010, p. 11). It is the standard function of schools to ensure that students become literate members of society. How does the education system determine if a student possesses literacy skills to proceed through their school career? For much of our nation's history, schools have determined who possessed the skills necessary to move from one grade to the next. The education system, however, began to be questioned by academics, military, and the business world, because of a series of events starting in the 1950s with Russia's launch of Sputnik; leading up to a 1983 report titled *A Nation at Risk*, which called out America's schools for graduating individuals who needed remediation (Jones, 2009; NCEE, 1983; Ravitch, 1983; Rudolph, 2002; Tyack & Cuban, 1995). The next wave of education reform came with the reauthorization of the Elementary and Secondary Schools Act (ESEA) in 2001, named No Child Left Behind (NCLB). The tenets of NCLB were to improve the education of historically underserved children and increase Reading First and literacy programs (U.S. Department of Education, 2002). The way to hold schools accountable to ensure students

were achieving, according to NCLB, was through accountability assessments. Both *A Nation at Risk* and NCLB highlighted an achievement gap that had been growing between groups of students.

The achievement gap is a concept that has been studied and researched to answer the question of why some groups of students perform at higher levels than others. Ladson-Billings, however, explored the issue of the achievement gap, but preferred to equate it to education debt. To Ladson-Billings (2007), “rather than focusing on telling people to ‘catch up’ we have to think about how we will begin to pay down this mountain of debt we have amassed at the expense of entire groups of people” (p. 316). She suggested, “this all-out focus on the ‘Achievement Gap’ moves us towards short-term solutions that are unlikely to address the long-term underlying problem” (Ladson-Billings, 2006, p. 4). That underlying problem is race, as well as poverty. The achievement gap is then a result of the issues of race and poverty in our country which several scholars (Carey, 2014; Irvine, 2010; Milner, 2013) have described as an opportunity gap, based on deeply rooted societal biases that have produced educational disparities between students of color and white students. Irvine (2010) emphasized other gaps that must be closed:

Gaps include the teacher-quality gap, the teacher-training gap, the challenging curriculum gap, the school-funding gap, the digital-divide gap, the affordable-housing gap, the health care gap, the employment-opportunity gap, the school-integration gap, and the quality child-care gap. (p. xii)

The term achievement gap, which Ladson-Billings (2006) contended has been unexamined and overused, parallels the issue of inequity in public education and is the result of inequality. “Closer examination of the [academic progress] results show that growing inequality is a central factor contributing to America’s educational decline” (Blankstein &

Noguera, 2016, p. 4). For the purpose of this study, references are made to the opportunity gap. One specific group of students that has and continues to experience the opportunity gap are English Learners (ELs). The term Latinx is used in this study to refer to English Learners who represent this population of students. It is the dominant population (consisting of 10,585 students) in the Midwestern urban school district for this study. Latinx is a person, male or female, who lives in the United States and who comes from, or whose family comes from, Latin America (Salinas, Jr., & Lozano, 2017).

ELs continue to be the fastest-growing population in United States schools. The latest data from 2018 show that ELs comprise 10.2% of the school population or 5 million students (National Center for Education Statistics, 2021). EL students are expected to participate in rigorous academic testing the same as their English-speaking peers; yet ELs continue to lag their peers on measures of academic achievement. Because this is coupled with the high demands of accountability testing through the recent reauthorization of the Every Student Succeeds Act (ESSA), which requires ELs to perform at the same level of academic proficiency as their non-EL peers, districts are under pressure to meet the high academic demands placed on ELs (Department of Education, 2019). As the demands for academic achievement accountability ramp up, the EL population continues to lag other groups of students.

Problem Statement

There is an opportunity gap between ELs and their English-speaking peers. Current data show that a majority of young ELs are not reading on grade level by the end of third grade. The results of the 2017 National Assessment of Educational Progress (NAEP) show ELs performing 37 points lower in fourth grade reading proficiency than non-ELs

(Department of Education, 2019). The ramifications of not reading on grade level by the end of third grade have a significant impact on the future for ELs. Polat et al. (2016) examined the magnitude of the opportunity gap utilizing NAEP scores for fourth- and eighth-grade ELs between the testing periods of 2003 and 2011. The study noted that “the [opportunity] gap between non-ELLs and the ELLs was bigger for reading than it was for mathematics by eight to nine points” (Polat et al., 2016, p. 546). EL students who enter Kindergarten perform at a significantly lower level than students who are not ELs on reading and mathematics achievement (Barrow & Markman-Pithers, 2016). Kieffer (2011) investigated the opportunity gap between ELs and non-ELs at the time they enter Kindergarten. Through this longitudinal study of the ECLS-K data, Kieffer’s study distinguished ELs who entered Kindergarten proficient in English, and ELs entering Kindergarten who were not proficient in English. The results of this study show that “English reading trajectories of [Language Minority] learners who enter kindergarten with limited English proficiency are much lower than those of nationally average native English speakers through eighth grade” (Kieffer, 2011, p. 1214). In their study on predictors and outcomes of early versus later English language proficiency among English language learners, Halle et al. (2012) found that “ELLs who were not proficient by first grade had the largest initial gaps in reading... achievement compared to native speakers” (p. 1). The opportunity gap is a real issue that many districts are facing regarding ELs. Specifically, in a Midwestern urban school district, recent trend data of the state assessment results report show that in 2018 the total number of students performing at proficiency on the reading assessment was 14.3%; whereas the total number of ELs scoring at proficiency was at 6.2% (Rand, 2019). The same results report has third grade

ELs scoring at only 10.6% proficiency, whereas third grade in the school district was at 13.9% proficiency (Rand, 2019).

The lack of reading proficiency by the end of third grade, which has shown to create an opportunity gap for ELs, impacts their future success. Research shows that reading proficiently by the end of third grade impacts the graduation rate; students who are not reading on grade level by third grade are four times less likely to graduate by the age of 19 than a child who is reading proficiently by that time (Fiester, 2013). Thus, the ability to read on grade level by the end of third grade is seen as the hallmark for future reading achievement. Third grade is seen as the pivot point from learning to read to reading to learn; as the text becomes more complex, the reader must have the fundamental reading foundations to engage in the learning (Hernandez, 2011). The Annie E. Casey Foundation reports by Fiester from 2010 and 2013 examined why reading by the end of third grade matters. There is the shift from learning to read to reading to learn in fourth grade; third grade reading matters in that students have fewer academic difficulties, graduate on time, and experience economic success. Those who are not reading on grade level by the end of third grade, according to Fiester (2010, 2013), contribute to an economic shortfall for the country because the pool for employment and college is lessened. In their study of third grade Latinx students reading instructional practices, Grasparil and Hernandez (2015) stated, “poor literacy achievement among English learners has contributed significantly to their high dropout rates, poor job prospects, and high poverty rates” (p. 35). Research has also shown that higher educational attainment equates with higher wages. The national dropout rate for ELs in 2017 was 8.9% compared to 5% of non-ELs (Department of Education, 2019). In 2016, the employment rate was higher for individuals with higher levels of educational

attainment than those with lower levels of attainment; 69% of those who completed high school were employed, compared to 48% who did not finish high school (Department of Education, 2019).

Why is there an opportunity gap for ELs in reading? The research suggests that a lack of English proficiency as well as other societal factors, such as poverty, are causes of the problem. Other research, such as one study conducted by Cardoza and Brown (2019), listed the major causes for the opportunity gaps for ELs to be failure of the public school system to address language; lack of bilingual support; family issues such as poverty; and accountability measures given in English, such as standardized assessments. Polat et al. (2016) stated that in addition to the previously mentioned causes, levels of schooling experience, affective, cognitive, and metacognitive student characteristics, as well as teacher quality, are factors that contribute to the opportunity gap for ELs. In another study of EL reading achievement, utilizing the Early Childhood Longitudinal Study-Kindergarten cohort dataset, Kieffer (2011) found that poverty may have a greater impact on ELs' reading achievement than it does for their English-speaking peers.

Regardless of the causes, the early reading opportunity gap for ELs leads to lower educational attainment, which in turn can impact future success. It is incumbent upon educators to ensure that ELs perform at the same academic achievement levels as their non-EL peers early; not to do so will lead to higher drop-out rates for ELs, which in turn causes higher unemployment rates and lower standards of living. Because of the demands of high-stakes accountability assessments, school districts look to interventions to close the opportunity gap for ELs.

Purpose of Study

The purpose of this quasi-experimental study is to determine if an adaptive software intervention program, Imagine Learning Language and Literacy (IL), implemented in a Midwestern urban school district, results in higher levels of English language proficiency and reading achievement for those third grade ELs who utilize the intervention. English language proficiency is defined by those who score at proficiency; they can produce grade-level academic content in the English language on the state English language proficiency assessment. Reading achievement is defined as those who demonstrate grade-level reading proficiency as outlined by the state reading assessment; specifically, that “a student at a Level 3 shows an effective ability to understand the use of the English language arts skills and knowledge needed for college and career readiness” (University of Kansas, 2019). Research shows that students reading on grade level by third grade have a higher graduation rate, which in turn leads to future success through employment rates (Department of Education, 2019; Fiester, 2013).

According to Creswell and Guetterman (2019), problems can be researched to give voice to individuals who have been silenced in society or to add knowledge by presenting the ideas and words of marginalized individuals. ELs are one such group that has been marginalized in society, as well as by education (Apple, 2008; Menken & Solorza, 2014; Valdes, 2005). This study will add to the body of literature addressing the need of ELs to close the opportunity gap. The study will also provide the school district with data to examine the effectiveness of the intervention program, thereby allowing the district to determine if this intervention program can deliver a return on investment.

Research Questions and Hypothesis

The research questions proposed in this quasi-experimental study are:

1. How effective is the adaptive software intervention program IL in improving third grade ELs' English Language Proficiency levels?
2. How effective is the adaptive software intervention program IL in improving third grade ELs' reading proficiency levels?

It is important for ELs to be reading on grade level by the time they end third grade to graduate on time and experience future success. Intervention programs are utilized to increase the probability that ELs experience reading achievement at the same level as their English-speaking peers.

There are two null and two alternative hypotheses for the first research question. The first null hypothesis (H_{01}) is that using the adaptive software intervention program IL has no effect on third grade English learners' ELP levels as determined by the difference between each EL's pretest and posttest KELPA scores (within-subjects factor). The second null hypothesis (H_{02}) is that using the adaptive software intervention program IL has no effect on third grade English learners' ELP levels as determined by the difference between the experimental and control groups' pretest and posttest KELPA scores (between-subjects factor).

The first alternative hypothesis (H_{a1}) is that using the adaptive software intervention program IL has a significant effect on third grade English learners' ELP levels as determined by the difference between each EL's pretest and posttest KELPA scores (within-subjects factor). The second alternative hypothesis (H_{a2}) is that using the adaptive software intervention program IL has a significant effect on third grade English learners' ELP levels

as determined by the difference between the experimental and control groups' pretest and posttest KELPA scores (between-subjects factor).

The null hypothesis for research question two, H_{03} states: Using the adaptive software intervention program IL has no effect on third grade English learners' reading proficiency as determined by the difference between the experimental and control groups' Kansas Reading Assessment scores.

The alternative hypothesis for research question two, H_{a3} states: Using the adaptive software intervention program IL has a significant effect on third grade English learners' reading proficiency as determined by the difference between the experimental and control groups' Kansas Reading Assessment scores.

The independent variable that was examined was the intervention; specifically, whether a third grade EL has utilized the adaptive computer software intervention program of IL or not. This variable's level of measurement was nominal, in that students either had the intervention or did not. There was a mediating variable, which was the amount of time spent on the intervention. The dependent variables for the study was the level of English language proficiency, as determined by the state English language proficiency assessment; as well as reading proficiency, as determined by the state assessment for reading. These variables are an interval level of measurement, in that the students receive raw scores. The dependent variables are also an ordinal level of measurement; the raw scores are converted to levels of performance. On the English language proficiency assessments, the raw scores are placed in one of three levels, Level 3 deems a student to be proficient in the English language; the raw cut scores for the state reading assessment are placed in one of four levels; Level 3 deems a student to be reading at grade level proficiency.

Theoretical Framework

The theoretical frameworks that guided this study are deficit theory and critical race theory, specifically LatCrit theory, as they are intertwined in the education of ELs in the United States. Reading theory, which is derived from behaviorist theory, is another framework that directed this study. Deficit theory in education began as an explanation as to why disadvantaged, poor, students had higher failure rates: Their language was not standard English; therefore, it was the cause of their failure (Eller, 1989). Standard English was equated with higher social status and was set as the language to be taught in American schools. Languages other than standard English are seen as different and are treated in a deficit light; for example, the labeling of students as Limited English Proficient or language minority (Shapiro, 2014). Education for language learners, therefore, is set up to “fix” these deficits in their language. According to Zhao (2016), the education system in the United States is deficit driven. Zhao stated, “the gap is used as a justification for sorting people into different social and economic strata so as to ensure the existing social order continues” (Zhao, 2016, p. 722). Embracing stereotypes and ignoring systems of inequality are seen as the world views of deficit theorists (Gorski, 2008).

To understand why there continued to be lower numbers of Latinx children enrolled in preschool programs, which perpetuates the opportunity gap of Latinx students, Schweitzer and Hughes (2019) studied the perceptions of Latinx parents as well as teachers in an urban Arizona school district Head Start program. Utilizing deficit theory as a guiding framework, this mixed case study focused on Kindergarten readiness through an academic, as well as socio-emotional and physical lens. Families and teachers were surveyed and participated in follow-up interviews. Results showed that while the Latinx families supported early

childhood programs, “the educators who completed the survey were consistent with the mindset of the deficit thinking paradigm in that they consistently rated Latinx parents as resistant, uninformed, and therein the cause of the problem” (Schweitzer & Hughes, 2019, p. 33). The deficit view of language in education aligns with critical race theory and LatCrit theory in that the deficit view comes from the systems of power that uphold deep-seated racism in the United States (Flores et al., 1991; Gorski, 2008).

Critical race theory (CRT) posits that “racism is rooted in American institutions, American culture, and the concepts of self-identity and group identity” (Lazos Vargas, 2003, p. 2). Ladson-Billings and Tate IV (1995) first linked CRT to education by developing three propositions:

race continues to be a significant factor in determining inequity in the United States; U.S. society is based on property rights; and the intersection of race and property creates an analytical tool through which we can understand social (and consequently, school) inequity. (p. 48)

Property in education, according to Ladson-Billings and Tate IV (1995), is aligned to property taxes and curriculum in that those schools with higher tax bases have better schools and more course offerings. LatCrit has been closely aligned with CRT, but considers language and immigration (Solorzano & Bernal, 2001) as critical issues for advocacy. Solorzano and Bernal (2001) stated, “critical and LatCrit theorist...challenge the predominant deficit frameworks used to explain ... educational inequity” (p. 313). Liggett (2014) posited that social and political actions enable linguicism, which is seen in educational policies affecting ELs; their discrimination is based on their language proficiency status.

Freire et al. (2017) examined Utah's Dual Language (DL) program with a critical race and LatCrit theoretical framework, drawing on the propositions of intersectionality and interest convergence. The data examined were a combination of a larger data set of Utah's DL education policy, as well as policy documents, promotional print materials, and videos. Using discursive analysis, two key findings surfaced: "Utah's policies adversely position the interests of Latina/o heritage and maintenance constituencies; and Utah DL programs are marketed toward the world language constituency in ways that marginalize Latina/o interests" (Freire et al., 2017, p. 281).

There are many theories as to how children learn to read. For the purpose of this study, behaviorist theory is examined as it supports the development of reading for elementary ELs. Behaviorism is a psychology perspective that has its roots in the early 1900s. Behaviorists such as Watson and Skinner were interested in the observable changes in human behavior, which was a result of a stimulus that elicited a response (Boghossian, 2006; Ertmer & Newby, 1993; Mergel, 1998; Zhou & Brown, 2015). In behaviorist theory, reading is seen as a linear and perceptual process (Pearson & Cervetti, 2015; Villanueva de Debat, 2006). Research has supported one method, phonics, that is linked to behaviorist theory to teach reading to ELs. Through phonemic awareness, students identify individual sounds in spoken words. Phonics is the explicit, direct instruction that teaches the alphabetic principle of how the letters are associated with those sounds (Chen & Mora-Flores, 2006; Henry, 2010; Slavin & Cheung, 2004). Robinson (2018) analyzed a K-12 international school of 110 first grade and 83 second grade EL students to determine why there was a significant decrease in reading achievement from grade one to grade two. Of significance, there had been a change in the reading curriculum from grade one to grade two from a phonics-based approach to a

whole language approach. An analysis of the data, utilizing t-tests and one-way ANOVA, showed that the students benefited from an intensive phonics-based approach to reading.

As previously stated, deficit theory and CRT/LatCrit are closely intertwined regarding English learners' struggles to obtain the level of achievement of their English-speaking peers; administrators and teachers often interact with them through a deficit lens (Caruthers & Friend, 2016; Flores et al., 1991; Schweitzer & Hughes, 2019; Shapiro, 2014; Sharma, 2018; Yeong et al., 2020). When there are deficit views of language learners, coupled with the systems of power to preserve the social order, such as standardized assessments, the education system intervenes to fix the perceived deficit; in this instance that deficit is language (Zhao, 2016). The three theories are further developed in chapter two as the problem in this study is investigated using a quasi-experimental design.

Design and Methods Overview

This quasi-experimental study was set in a Midwestern urban public school district. Participants in the study were third grade EL students in the school district during the 2018-2019 school year. The sample was composed of those ELs in the school district who utilized the adaptive software intervention program of Imagine Learning Language and Literacy (IL). Although several elementary schools did not have access to the intervention program, a grant allowed seven elementary schools in the district to have access to the intervention program. The data were collected by working with a representative from the district's research and assessment department. The district representative provided information on the usage of IL: the state English Language Proficiency Assessment data of the third grade ELs from Kindergarten through third grade, and the data from the 2019 state reading assessment. The

data were provided in an Excel spreadsheet and deidentified to protect the interest of the students.

A t-test established that the ELs receiving the intervention software and those ELs who did not receive the intervention software were comparable prior to the intervention. To determine if the intervention had an effect on English language proficiency, pre and posttest analysis were performed through split plot ANOVA. To determine if the intervention resulted in higher levels of reading proficiency for those ELs who utilized the intervention, another t-test was performed with the posttest results of the English language proficiency analysis and the 2019 state assessment results.

Research notes that several factors will influence the attainment of English; family socio-economic status, and home literacy, as well as maternal level of education are factors in a child's development of the English language (Echevarria et al., 2017; Goldenberg et al., 2006). The school district does not gather data on the maternal level of education or home literacy; therefore, these were limitations to the study. The research study was conducted in a common educational setting with normal educational practices. Because the researcher is employed by the district, it was important to ensure that ethics were considered in performing this study. There was no contact between the researcher and the students; only reported assessment data were examined. To ensure adherence to ethical considerations, the data collected on the participants in the study were deidentified, and the researcher worked with the district technology services department to encrypt the data for storage, all to minimize the risk of breach of confidentiality. The deidentification of the data also allowed for privacy through the Family Educational Rights and Privacy Act (FERPA) by minimizing the possibility of matching or tracing any achievement data to individual students.

Definition of Key Terms

Behaviorist Theory of Reading: A theoretical perspective of reading as a behavior composed of isolated skills, each of which could be reinforced to increase student achievement.

Bilingual Education: The teaching of academic content in two languages, in a native and second language.

Computer Assisted Language Learning (CALL): The study of applications of the computer in language teaching and learning.

Critical Race Theory (CRT): A theoretical and interpretive model that examines the appearance of race and racism across dominant cultural modes of expression.

Deficit Theory: This theory posits that students who differ from the norm in a significant way should be considered deficient, and that the educational process must correct these deficiencies.

English Learner (EL): A student aged 3–21 not proficient in spoken and/or written English, as determined by an English language proficiency assessment.

English as a Second Language (ESL): The objective of the ESL program is to improve the level of an English learner. The ESL classes teach different English language skills, according to the student's ability.

Every Student Succeeds Act (ESSA): Every Student Succeeds Act (ESSA) was signed by President Obama on December 10, 2015. This bipartisan measure reauthorized the 50-year-old Elementary and Secondary Education Act (ESEA), the nation's national education law and longstanding commitment to equal opportunity for all students.

Imagine Learning Language and Literacy (IL): Imagine Language & Literacy is an adaptive learning solution that accelerates reading and language proficiency for students in grades PreK–6. Designed to supplement core literacy instruction, Imagine Language & Literacy provides instruction and practice in all four domains of literacy—reading, writing, listening, and speaking.

Kansas Assessment Program (KAP): The Assessment Program of the state of Kansas includes a variety of tests: reading, mathematics, science, and social studies. KAP tests and tools are designed to support educators and policymakers in evaluating student learning, as well as to meet the requirements for federal and state accountability.

Kansas English Language Proficiency Assessment (KELPA): The Assessment Program of the state of Kansas which examines the level of English language proficiency. The assessment examines the levels of student performance in reading, writing, listening, and speaking. KELPA is designed to support educators and policymakers in evaluating student learning, as well as to meet the requirements for federal and state accountability.

L1: A notation referencing native, or first, language of an English Learner.

L2: A notation referencing the acquisition of a second language by an English Learner.

LatCrit Theory: A framework that can be used to theorize and examine the ways in which race and racism explicitly and implicitly impact the educational structures, processes, and discourses that impact Latinas/os specifically.

Latinx: Relating to people of Latin American origin or descent (used as a gender-neutral or nonbinary alternative to Latino or Latina).

National Assessment of Educational Progress (NAEP): An assessment that measures what U.S. students know and can do in various subjects across the nation, states, and in some urban districts. Also known as The Nation’s Report Card, NAEP has provided essential information about how students are performing academically since 1969.

No Child Left Behind Act (NCLB): An Act that authorizes several federal education programs that are administered by the states. The law is a reauthorization of the Elementary and Secondary Education Act. The major focus of No Child Left Behind is to close student achievement gaps by providing all children with a fair, equal, and significant opportunity to obtain a high-quality education. The U.S. Department of Education emphasizes four pillars within the bill: accountability, flexibility, research-based education, and parent options.

Phonics: A method for teaching people how to read and write an alphabetic language. It is accomplished by demonstrating the relationship between sounds of spoken language and the letters or groups of letters, or syllables, of written language.

Organization of Subsequent Chapters

Chapter two of this study presents a deeper investigation of the theoretical framework guiding the study. Chapter three examines a review of the literature pertaining to the study. Chapter four presents the design of the study and the methods used to test the hypotheses. Chapter five presents the data collection and analysis. The study concludes with chapter six, which includes a discussion of the findings, implications specifically for leadership, limitations, and results.

CHAPTER 2

THEORETICAL REVIEW

As stated in chapter one, current data show that a majority of young ELs are not reading on grade level by the end of third grade. There is an opportunity gap between ELs and their English-speaking peers. Therefore, the purpose of this quasi-experimental study was to determine if the software intervention program of Imagine Learning Language & Literacy (IL), implemented in a Midwestern urban school district, resulted in higher levels of English language proficiency and reading achievement in third grade ELs. English language proficiency is determined by the state English language proficiency assessment; reading achievement is defined as demonstrating grade level reading proficiency as outlined by the state assessment program. Research shows that students reading on grade level by third grade have a higher graduation rate, which in turn leads to future success through employment rates (Department of Education, 2019; Fiester, 2013).

The review of the literature was conducted through several databases including Google Scholar, ERIC, JSTOR, and EBSCO, as well as relevant books, articles, and reports. The key search terms used were *deficit theory*, *critical race theory*, *LatCrit theory*, *English Language Learners*, *behaviorist*, and *behaviorism learning theory*, *phonics*, and *predictors of reading achievement*. References cited in each article were also explored to see if they warranted review to meet the needs of the study. The search for literature exposed gaps that support the basis for this study. Regarding deficit theory, most of the literature addressed language of low socioeconomic status of families and their children. Utilizing JSTOR, an advanced search for deficit theory, yielded over 100,000 results; when the term English language learners was added, only 4,396 studies were produced. When the search was

narrowed to more recent research from 2015 to the present, it yielded 10,381 and 585 relevant studies, respectively. Therefore, there is a lack of recent research pertaining to deficit theory as it is applied to English language learners. Likewise, when LatCrit theory was searched in EBSCO for research from the year 2015 to the present, only 22 results were produced; when adding in the term English language learners, the results yielded only four empirical studies. LatCrit theory, like deficit theory, has gaps in recent research as it pertains to ELs. In addition, most of the research studies utilizing these theories were qualitative in nature. Behaviorist theory also lacks current research as it pertains to reading achievement for ELs. A search in EBSCO for behaviorist learning theory with reading instruction and English Language Learners yielded one study. Taken together, the lack of recent research of the three theories warrants the nature of this study.

The purpose of this chapter is to further explore the theories shaping this study, deficit, LatCrit, and behaviorist, as they can support the nature of the opportunity gap for ELs, as well as the drive to close the gap. Historical perspectives, as well as recent perspectives and research, are examined as they relate to the experiences of ELs and the achievement gap. Deficit theory, the foundation for the growth of LatCrit, is examined first. The underpinnings of racism are seen in the historical perspective of deficit theory, which led to the tenets of LatCrit theory. Behaviorist theory, as it pertains to the method of phonics instruction, is examined last, due to the marked accomplishments of its impact on reading instruction for ELs.

Deficit Theory

Our nation, according to Pai et al. (2006), suffers from ethnocentrism, which is:

the belief in the superiority of our own culture, [which] leads us to judge others in terms of our own cultural norms and inclines us to conclude that those who do not conform to our norms must be stupid, depraved, irresponsible, psychopathic, inferior, or sinful to a point beyond all redemption. (pp. 33–34)

The term deficit, as it appears in Merriam-Webster (n.d.), is a lack of ability or functional capacity. In education, deficit theory has defined students who are different from the norm and has become synonymous with students who have a problem that needs to be fixed (Reference.com, 2020). Deficit in education then means that a student is lacking, or inferior, in their ability to function at the normative level, which is defined by those in authority. Deficit thinking underscores deficit theory (Dudley-Marling, 2007; Gorski, 2008; Ladson-Billings, 2007) and places the blame on students from historically oppressed populations as responsible for the challenges and inequities they faced instead of examining the oppressive structures, policies, and practices of educational settings (Davis & Museus, 2019, p. 119). This then leads to labeling students to show their deemed deficiencies, producing terminology such as at risk, disadvantaged, subgroup, and underserved; thus defining students by perceived weaknesses rather than strengths (Aguilar, 2020; Caruthers & Friend, 2016; Gorski, 2008).

Deficit theory or a deficit mindset, as seen through the labeling of students to note deficiencies, has been in education for quite some period. According to Eller (1989), deficit theory first emerged in the 1960s to explain why poor children were not performing at the level of their higher socio-economic peers. The language that these children used was not standard English. The poor were linguistically different; language was then seen as a deficit (Gorski, 2008). Flores et al. (1991) further explored the historical perspective, equating it to cultural deficits. They posited that prior to the 1960s, the idea of deficits regarding language

was formed based on IQ scores—again, it was a way to define deficits based on those who were not in the majority—those who were not White. Further, Flores et al. (1991) pointed out that genetic explanations have formed regarding deficit theory and language: “the cause of this intellectual deficiency was not related to language; rather, ...the [it was a] result of a general ‘genetic inferiority’ within the immigrants” (p. 371). Hence, the educational policies and practices to fix these deficiencies in language began among those whose first language was not English. Grainger and Jones (2013) equated this to a linguistic difference amounting to linguistic, cognitive, and cultural deficits. The education system fixes these perceived deficits.

Davis and Museus (2019) analyzed 44 publications over the last 20 years to determine how scholars fully engage the concepts surrounding deficit thinking in their work. They discovered “critiques of how discourses related to [opportunity] gaps, students of color, people in poverty, and students in special education perpetuate deficit ways of thinking” (p. 121). The authors identified four aspects of deficit thinking that are significant for understanding its nature and impact on the lives of individuals: (a) blame the victim orientation, (b) a symptom of larger systemic oppression, (c) a pervasive and implicit nature, and (d) a reinforcement of hegemonic systems. Focusing on the individual, according to Davis and Museus (2019) allows educational systems to ignore their role in achievement outcomes. This in turn creates the context of beliefs that languages other than English are a problem that must be fixed; what has played out in the education realm are self-fulfilling prophecies about the system, as well as the students themselves.

Zhao (2016) asserted that the education system is set up in a deficit-driven framework. Quick fixes of educational policies, structures, and practices, stated Davis and

Museus (2019), reinforce hegemonic systems and silence the examination of the root causes of deficit thinking regarding language. The aim is to fix the perceived deficiencies of the students who are not performing at a prescribed level of proficiency, which is the utilization of standard English. Montano and Quintanar-Sarellana (2011) described how this is played out for ELs through the implementation of instructional models, such as English as a Second Language (ESL), and other scripted programs to fix the deficiency of not speaking standard English.

Deficit thinking triggers lower expectations of ELs, leading to their disengagement in schools (Choi & Slaughter, 2021; Eller, 1989; Shapiro, 2014). Sharma (2018) asserted that low expectations for students are derived from unconscious deficit perspectives. The system, therefore, is set to perpetuate the cycle of low expectations. One such study by Schweitzer and Hughes (2019), highlighted in chapter one, focused on the deficit perceptions educators had of Latinx parents who enrolled their children in an early childhood Head Start program. The Head Start teachers viewed parents of culturally and linguistically diverse students as problems, and their unconscious bias, as Sharma (2018) described, transferred to their interactions with EL students.

Similar findings were identified by Yeong et al. (2020), in pre and post open-ended surveys of 27 U.S. pre-service and in-service teachers enrolled in an emergent bilingual online course, and their changes in perceptions of EL students following the completion of a culturally relevant online course related to mathematics instruction. The survey examined five domains: cognitive demand, mathematical discourse, power and perception, academic language support, and cultural/community-based funds of knowledge. While the overall results showed that after the online course, over half of the participants changed their beliefs

about teaching mathematics to emergent bilinguals, the domain of cognitive demand is of note. This domain was “to examine how teachers believe emergent bilinguals should be given challenging tasks and engage in critical thinking in a mathematics class” (Yeong et al., 2020, p. 76). The domain also centered on the need for emergent bilinguals to learn English before they could learn the content. After the online course, 61% of the participants had either a minor or major change in their beliefs within this domain. The overall results seem promising in how they were presented—over half changed their beliefs; yet closer examination shows that there were still teachers who have the deficit perspective of ELs abilities to learn. English must come first before ELs can master the content.

With the educators themselves having a deficit perspective, which unconsciously emerges in their teaching, such bias leads students to internalize deficit beliefs in their own performance. Steele (1997) alluded to this through the concept of stereotype threat and defined it as “the threat that others’ judgments or their own actions will negatively stereotype them in the domain” (p. 613). When there are stereotypes about groups, in this case ELs and their lack of ability to master content due to their lack of English language proficiency, students fear this stereotype and are likely to internalize the threat, which leads to an impact on their school performance. Additionally, these deficit perceptions are played out through the accountability system of assessments. Consequently, some educators believe there must be an achievement deficit between ELs and their English-speaking peers because they do not speak standard English. Standardized tests, according to Sharma (2018), perpetuate the deficit agenda; while Caruthers and Friend (2016) asserted that NCLB “exacerbates the deficit orientation” (p. xix). An example is seen through the language used to establish categories of students; the term “subgroup” implies that students are beneath their peers

(Caruthers & Friend, 2016). To further develop the perpetuation of the perceived deficiencies of language, NCLB also led to many Latinx students being placed in test preparation and test practice classes in order to score higher on the assessments because their language was not at a level at which they could score high on the assessments (Apple, 2008).

Shapiro (2014) conducted a qualitative study on how high school former refugees from African countries in a New England town “perceived and resisted ...deficit discourse” (p. 386). Test results were published in the local paper, citing the underperformance of the African students. In response, several African students participated in a walkout and protest in front of the school. This led Shapiro to explore what deficit discourse looks and feels like for these EL students, and how students negotiate and resist this discourse. Three sources of data were utilized: media footage of the protest and the follow-up meeting with the students; individual interviews with nine students; and newspaper articles and other publicly available documents. Four overarching categories were identified by Shapiro: essentialization, educational deficit, intellectual inferiority, and resistance. The students themselves were able to articulate how deficit perspectives, such as Steele’s (1997) notion of stereotype threat, created educational situations they could not avoid. The community, as well as the teachers, viewed them as having little or no schooling, and lacking in literacy; therefore, they continued to experience a gap in achievement. They were placed in ESL courses, when they knew the general education English classes afforded more opportunity. The students also articulated that they were aware that they were viewed as being educationally inferior, in that “some of their teachers did not see them as ‘smart’” (p. 397).

As described in Choi and Slaughter’s (2021) more recent study examining the lived experiences of 14 international high school EL students in Melbourne, Australia, stereotype

threat was also pervasive. Utilizing language trajectory grids as the primary data source, students plotted their language experiences, which included their feelings and reasons for their feelings; data were also collected via audio and video recordings. Applying thematic analysis, the authors constructed themes from the audio recordings, and motivation was examined through their language trajectory grids. The findings supported that the students began to internalize their learning of the English language through their scores on achievement tests; the exam scores developed the “sense of whether they were ‘good’ or ‘bad’ at English” (Choi & Slaughter, 2021, p. 99).

There is a need to shift the deficit discourse to one that is asset-based regarding the education of ELs. Zhao (2016) called for a paradigm shift which stops defining students through weaknesses and fixing their perceived deficits and starts looking for and supporting strengths. Lander (2019) advocated for higher academic standards, value of the native language, and collaboration with families. Shapiro and MacDonald (2017) examined how deficit discourse created “invisible forms of agency that are central to a student’s sense of identity” in their case study of a student with a refugee background from Somalia whose family had relocated to a city in the New England area (p. 80). Through their review of the literature on deficit discourse, the authors sought to answer which deficit-oriented narratives were most salient in scholarly discussions about students from Somalia, and to find evidence of an alternative, asset-oriented discourse. Narrative inquiry was utilized through the student’s personal memoir, a semi-structured interview, a recording of the student’s interview on a radio station, articles from newspapers, and interviews with faculty and staff that worked with the student. The authors were able to present an asset-based discourse with three themes: agency, critical awareness, and contribution. The findings allowed the reader to

see that what could have been perceived as deficits in the student's experiences were viewed through an asset lens by the student himself.

An ethnographic study of 22 Latinx students in one Texas teacher's first grade classroom examined how agency can counteract deficit thinking. The authors utilized a theoretical framework of agency which provides "opportunities to expand [students']...capabilities as they make choices for their own wellbeing" (Colegrove & Adair, 2014, p. 124). Classroom observations, interviews, and artifacts were collected. As a result, the students' capabilities were viewed by how they were as learners, instead of by how they performed on benchmarks.

Although languages other than English have been a perceived deficit in education based on the historical perception of language, as education systems try to fix the problem (as they view it), they are perpetuating a cycle that continues to set students down a path for continued failure. The deficit theory is comprised of the systems of power that operate in the United States. Montano and Quintanar-Sarellano (2011) "have argued that language is political, that deficit views of language lead to reductionist models of language instruction and negative perception of language difference" (p. 209). Flores et al. (1991) posit that those in power utilize historical, social, political, and economic policies to control those who are not in power. Adichie (2009) mentioned this as the single story—the stereotypes that are formed which create an incomplete picture of the person or culture.

These phrases pertain to stereotypes and systems of power, which aligns with Critical Race and LatCrit theory. As mentioned in chapter one, deficit theory and LatCrit theory work hand in hand in the educational system for language learners. Many of the studies explored within deficit theory also utilized critical race theory and LatCrit in their theoretical

frameworks. Therefore, LatCrit theory is now explored as it relates to the opportunity gap for ELs.

LatCrit Theory

LatCrit theory arose from Critical Race Theory in the early 1990s. Critical Race Theory (CRT), likewise, developed through the Critical Legal Studies (CLS) movement of the 1970s (Tate IV, 1997). It is here that power structures and racism are first identified as the basis for the struggles of marginalized groups. Tate (1997) explained that the “scholars of the CLS movement...attempted to analyze legal ideology and discourse as a mechanism that functions to re-create and legitimate social structures” (p. 207). Therefore, the emphasis was on the legal and social structures of the United States. Yet, authors such as Bell and Delgado began to incorporate elements into CLS that would be the formation of CRT. Bell (1980) introduced three arguments of—analysis of property, interest-convergence principle, and interest-convergence theory—while Delgado (1990) inserted the following themes:

An insistence on “naming our own”; the belief that knowledge and ideas are powerful; a readiness to question basis premises of moderate/incremental civil rights law; the borrowing of insights from social science on race and racism; critical examination of the myths and stories powerful groups use to justify racial subordination; a more contextualized treatment of doctrine; criticism of liberal legalisms; and an interest in structural determinism—the ways in which legal tools are thought—structures can impede law reform. (p. 95)

Through Delgado’s work, the concept of voice was inserted. CRT was formulated with five main tenets: counter-storytelling, the permanence of racism, whiteness as property, interest convergence, and the critique of liberalism (Lazos Vargas, 2003; Tate, 1997). These tenets help to highlight the origin and current manifestations of racial oppression, discrimination, and inequality found within the culture of the United States.

Ladson-Billings and Tate (1995) are recognized as the first to link CRT to education. They discussed how social inequities and school inequities aligned based on three propositions: race continues to be a significant factor in determining inequity in the United States; U.S. society is based on property rights; and the intersection of race and property creates an analytic tool through which we can understand social (and, consequently, school) inequity.

Specifically linking property to curriculum, Ladson-Billings and Tate (1995) asserted that curriculum is available to students based on their social positions. Types and amounts of curriculum resources, tracking groups of students, and course offerings such as Advanced Placement (AP) are examples of curriculum related to property (Ladson-Billings & Brown, 2008). School districts that have a higher tax base—wealthier, suburban, white districts—can provide these opportunities; while poorer urban school districts, which are comprised of marginalized groups, are not able to offer such a variety of curriculum. Solorzano and Yosso (2001b), however, stated:

a CRT of education has at least five themes that form its basic perspectives, research methods, and pedagogy: the centrality and intersectionality of race and racism; the challenge to dominate ideology; the commitment to social justice; the centrality of experiential knowledge; and the interdisciplinary perspective. (pp. 2–3)

From the beginning, the focus of CRT concentrated on marginalized groups, yet the emphasis was on African Americans and females. It was not explicitly stated that Latinx people were also part of the marginalized groups. From here, the concept of LatCrit evolved. Valdes (2005) provided context to the formation of LatCrit, stating, “Latinas/os were, for the most part, invisible in those activities and discourses. LatCrit theory emerged...in reaction to this continuing marginality and invisibility” (p. 153).

The very name, LatCrit, is of significance and provides background to one of its central tenets. Latina/o stipulates identification of people of color, while Hispanic postulates an invented identification that is associated with white, creating pan-ethnicity, which in turn supports the central feature of community building (Valdes, 2005). LatCrit, as stated by Valdes (2005), has seven guideposts that created a body of theory and praxis devoted to four functions: production of knowledge; advancement of social transformation; expansion and connection of anti-subordination struggles; and cultivation of community and coalition.

Solorzano and Yosso (2001a) introduced the connection between LatCrit and education as:

A framework that can be used to theorize and examine the ways in which race and racism explicitly and implicitly impact on the educational structures, processes, and discourses that affect People of Color generally and Latinas/os specifically. Using the experiences of Latinas/os, a LatCrit theory in education also theorizes and examines that place where racism intersects with other forms of subordination...is conceived as a social justice project that attempts to link theory with practice, scholarship with teaching, and the academy with the community. [It] is transdisciplinary and draws on many other schools of progressive scholarship. (p. 479)

Velez et al. (2008) explored the actions of social justice while utilizing LatCrit theory in their study on Latinx youth activism through a document and content analysis of media representation of Latinx activists between March 1, 2006, and May 31, 2006. News coverage and newspaper articles were examined to determine if the activists were portrayed either positively or negatively through either direct or indirect activism. Direct activism was categorized as events such as school walkouts or other physical acts, while indirect acts were students writing their own biographies. Direct forms of activism were portrayed with terms such as disrespectfulness and truancy, while the indirect forms of activism were portrayed in a more positive light; highlighting that the “positive portrayals of indirect activism were

strategically used to negatively frame more direct forms of activism, namely the student walkouts” (Velez et al., 2008, p. 20).

Solorzano and Bernal (2001) employed qualitative inquiry through individual and focus group interviews of women who participated in the 1968 East Los Angeles school walkouts. To examine student resistance through the framework of LatCrit, they used the method of counter-storytelling through a constructed dialogue between a professor and undergraduate student discussing the 1993 UCLA student strike for Chicana and Chicano studies (Solorzano & Bernal, 2001). They noted that most of the women who participated in the 1968 walkouts “first began to develop a critical consciousness that explored the inequities of society” from their parents, as well as their own personal experiences of oppression (p. 321).

Exploring her participation in a council established by a Senate bill that was brought about by an Office of Civil Rights (OCR) complaint in a western state of the United States, Salas (2017) employed autoethnography and LatCrit counter-storytelling to demonstrate the perpetuation of racism in one educational system. Beginning with her lived experiences, which was highlighted by her Kindergarten teacher and school changing her name from Raquel to Rachel, Salas unearthed patterns of the dominant culture within school systems. This led to her participation on the council where recommendations, such as requiring all teachers to have an endorsement to teach ELs as part of their licensure, were dismissed; Salas found that the recommendations that would have the least disruption—those that would benefit the educational system—were the ones adopted.

Monzo and Rueda (2009) examined race and racism through language in their two-year ethnography of eight fifth-grade students and their families in a large urban California

immigrant community. To examine how the students coped with the stigmas associated with English proficiency, they introduced the concept of “passing” to explain how the students utilized strategies to appear more English fluent. The students had developed an awareness “of the power and status of English” (p. 32). They concluded that “a CRT and LatCrit perspective helps us to see that language has now become the new acceptable category that maintains the old order of distinguishing people by race” (p. 22). Liggett (2014) associated this with linguicism; how students encounter discrimination based on their lack of language proficiency or their accent.

Another study by Perez Huber (2010) applied a conceptual framework of racist nativism, which includes both CRT and LatCrit, in her study involving ten undocumented Mexican female college students in California. Utilizing critical race testimonies, the authors revealed themes that demonstrated how racist nativism impacted the students’ educational journeys. The women had all experienced racist beliefs about immigrants and internalized these perceptions of belonging or not belonging. Bringing the research to the present, there has been an increased sense of nativism in the United States since the 2016 election. In their article on an intersection between immigration and educational policies, Lopez and Matos (2018) utilized CRT and LatCrit to assert that recent state-level immigration legislation, the calls to build a wall, the dismantling of DACA (Deferred Action for Childhood Arrivals), as well as school-to-deportation pipelines, are examples of how “education is currently being weaponized, particularly against immigrant youth, children of immigrants, and Latino immigrant families” (p. 154).

Apple (2008) stated, “any analysis of the ways in which unequal power is reproduced and contested in society must deal with education” (p. 25). Educators’ deficit thinking of ELs

can be exacerbated as stereotype threat (Steele, 1997). Young EL Latinx students can internalize negative constructs of belonging or not belonging based on their language (Perez Huber, 2010). The first two theories guiding this study are aligned as they relate to the causes and perpetuation of the opportunity gap for ELs. Deficit and LatCrit theories demonstrate the systematic and pervasive nature of education for marginalized groups—ELs—in our nation. The final theory, behaviorist reading, however, can be seen as an attempt to work with and remedy these perceived deficiencies.

Behaviorist Reading Theory

As mentioned in chapter one, the ability to read opens the door to future success. The ability to read is fundamental to participating in society. To function in everyday life, one must have the ability to read and comprehend a variety of texts. Literacy impacts individuals' employment, overall health, and poverty rates (Diallo, 2020). Literacy is seen as the gatekeeper for the future success of individuals as well as American society. It is the standard function of schools to ensure that students become literate members of society. Yet, research has shown that ELs have struggled to attain success in reading achievement. There have been arguments as to how reading instruction should be implemented based on different theoretical perspectives that are aligned with learning theories, and each perspective influences instructional design. One such perspective is behaviorism. It is significant that learning theories related to reading instruction that guide instructional design are developed without the specific needs of ELs in mind.

Behaviorism is a psychology perspective that began in the early 1900s. Behaviorists such as Watson and Skinner were interested in the observable changes in human behavior, that were a result of a stimulus that elicited a response (Boghossian, 2006; Ertmer & Newby,

1993; Mergel, 1998; Zhou & Brown, 2015). Reading is seen as a linear, bottom-up, and perceptual process within behaviorist theory (Pearson & Cervetti, 2015; Villanueva de Debat, 2006). Behaviorist reading theory, therefore, is situated with the teacher through direct instruction teaching skills from lowest to highest (Ertmer & Newby, 1993; Weegar & Pacis, 2012). According to Budiman (2017), the teacher is controlling the stimulus and response of the learner, while the results are measured, observed, analyzed, and tested objectively. A method within this theory, phonics, is explicit, direct instruction that teaches the alphabetic principle (Chen & Mora-Flores, 2006; Henry, 2010; Slavin & Cheung, 2004). Kilpatrick (2015) stated that phonics has consistently demonstrated superior outcomes for reading. Rayner et al. (2002) also concluded that “children become skilled readers much more readily when their instruction includes phonics” (p. 86). Through a meta-analysis of the literature examining 66 treatment/control comparisons of systematic phonics instruction, Ehri et al. (2001) determined that phonics instruction was more effective than other approaches to reading instruction. Morris (1993) had comparable results in a year-long longitudinal study of 53 suburban kindergarten students in Chicago. Utilizing descriptive analysis of the medians, as well as Guttman scale analysis of individual student scores, the results demonstrated the connection of phonemic awareness with learning to read. Scholars became disenchanted with the behaviorist approach to learning and reading instruction; therefore, a new perspective to the teaching of reading, cognitive theory, became the preferred model to follow.

Cognitive theory began in the late 1960s and early 1970s. The focus was the inner workings of the brain; there was a thought process behind behavior (Mergel, 1998; Pearson & Cervetti, 2015). Ausbel (1968) connected cognitive theory to learning, making the

distinction between meaningful learning as opposed to the behaviorist approach of rote learning. This became known as the top-down approach to reading, or reading as an active process (Mergel, 1998; Pearson & Cervetti, 2015; Rayner et al., 2002; Villanueva de Debat, 2006). Closely related to cognitive theory is schema theory—how learners bring their own background and perspectives to their own learning (Villanueva de Debat, 2006). Direct connections of cognitive theory are seen with teaching pedagogy of second language acquisition, which is examined in chapter three.

Constructivism emerged as a branch of cognitivism, with a distinguishing point that the learner creates meaning as opposed to acquiring meaning (Ertmer & Newby, 1993). With the constructivist approach, a new method, the whole language approach, emerged as to how to teach reading. “Whole language emphasizes learning reading and writing naturally with a focus on real communication and is opposed to the idea of teaching the separate components of language...in isolation” (Ting, 2019, p. 184). The “reading wars” were waged as to which approach to reading instruction should be implemented. As a result, most districts moved away from phonics towards a whole language approach in the 1990s. Yet, research has supported the phonics method for the teaching of reading for ELs over the whole language approach. As discussed in chapter one, Robinson’s (2018) follow-up analysis found that because of move away from the phonics method to whole language, ELs’ reading achievement dropped.

As time moved forward and more research was conducted, there was a blend of the two models, behaviorist and constructivist, to form an integrative approach to reading, balanced literacy. Balanced literacy is comprised of the following components taught within a reading block: interactive read-aloud, shared reading, guided reading, writing workshop,

and word work (Chen & Mora-Flores, 2006). Yet, this approach was not developed with ELs in mind, and the research has shown that it has not proven effective for ELs in that it does not pay attention to the necessary supports of academic language (O'Day, 2009). Others state that adaptations need to be made to the components of balanced literacy to engage and support ELs in reading instruction (Velasco, 2012).

The National Reading Panel's (2000) report cited five major components of reading: phonemic awareness, phonics, fluency, comprehension, and vocabulary; yet there was no specific reference to the components as they related to reading instruction for ELs (Snyder et al., 2017). However, August and Shanahan (2006) released a report citing that the five basic components of reading instruction were also beneficial to ELs. Snyder et al. (2017) examined reading intervention literature between January 2003 and July 2015 to determine the characteristics of interventions that denote large effects for the five reading components for ELs. The literature had to meet six criteria to be included in the review, which resulted in ten studies eligible. These were coded and recognized for large effect sizes. Two studies had large effect sizes for phonemic awareness; three studies had large effect sizes for phonics; three for fluency; four for comprehension; and four for vocabulary. This study also found differences between levels, elementary to middle, showing that large effect sizes for phonemic awareness and phonics were seen in interventions for first grade ELs.

Many of the practices that are proven effective for English proficient students are also effective with ELs. August (2018) found that phonemic awareness, phonics, oral reading fluency, and reading comprehension are appropriate skills to utilize with ELs. Slavin and Cheung (2004) provided guidelines for policy and practice based on the research of reading instruction for ELs. The research supports: (a) use of native language in early reading

instruction, (b) paired bilingual strategies, and (c) systematic phonics. Utilizing multilevel modeling, Vadasy and Sanders (2010) conducted a study of 148 full-day Kindergarten students, 84 of whom were ELs, in ten urban public schools who received phonics instruction as an intervention, to determine the effects on student outcomes. ELs benefited from supplemental reading instruction with phonics if they were determined to be at risk for poor reading outcomes. Two years later, Vadasy and Sanders (2012) examined the students, now in second grade, to determine the long-term treatment effects of phonics instruction. While there was a drop in the number of students still present, now only 78 ELs, classroom observations and tests were again examined through multilevel modeling. The results showed that those ELs who received phonics instruction in kindergarten continued to show advantages in their performance; specifically, that when the students' literacy block included word study and meaning-focused activities while they were in first and second grade, ELs benefited.

Brice and Brice (2009) examined 80 randomly selected Hispanic EL Kindergarten students in a large central Florida metro school to determine English phonemic awareness and phonics skills impact on beginning reading skills. The general linear model MANOVA was performed using the Wilk's Lambda F test. The results showed that identification of phonemes and graphemes are developmental reading skills, and that "it is imperative that early reading intervention target phoneme and grapheme identification...to diminish the apparent early gap" (p. 222). Ekpo et al. (2010) examined the extent that the Jolly Phonics program had on 168 purposively sampled Nigerian primary one students, across five schools, on their English reading development in their pretest-posttest experimental study. Data collected were analyzed using means, independent t-tests, ANCOVA, and the Burt Reading

Test. They concluded that through the initial analysis of the pretests, there were no differences between the two groups on their means. After treatment, t-tests analysis showed a significant difference between the control group and the experimental group that received the Jolly Phonics treatment.

Most school districts moved away from the phonics method of reading instruction despite the research. Recently, however, the pendulum has swung back. In an online seminar conducted by Cindy Hadicke (personal communication, June 22, 2020), an Elementary Education Consultant for the Kansas Department of Education, the foundations of literacy were explained through the concept of brain science. According to Hadicke (2020), there are five steps to proficient reading: cognitive and language skills, decoding, fluency, comprehension, and metacognition. These five steps become the process that elementary educators infuse through their daily instructional practices to produce students who are proficient readers. Current research, the science of reading, is aligned to behaviorist theory—the systematic, explicit instruction of the components of reading.

Reading theory is aligned with learning theories; whichever prevalent theory is occurring at the time, the instructional design of reading follows suit. While there have been references to many different theories that correspond to the different instructional approaches for teaching reading to ELs, the research supports the systematic, explicit instruction of phonics to young ELs, which has its roots in behaviorist theory (August, 2018; August & Shanahan, 2006; Robinson, 2018; Snyder et al., 2017).

Conclusion

As stated, the purpose of this quasi-experimental study was to determine if the software intervention program of IL implemented in a Midwestern urban public school

district resulted in higher levels of English language proficiency and reading achievement in third grade ELs. Three theories were presented in this chapter to support the purpose of this study. Deficit theory and LatCrit demonstrate the historical perceptions of teaching ELs in our schools; yet through behaviorist reading theory, alignment to the teaching of language acquisition supports the education of ELs. These theories support the sections of the literature review chapter that are presented next: second language acquisition and language programs, the historical landscape of language in the United States, and Computer Assisted Language Learning (CALL).

CHAPTER 3

REVIEW OF THE LITERATURE

Current data show that a majority of young ELs (English Learners) are not reading on grade level by the end of third grade (Department of Education, 2019; Rand, 2019). There is an opportunity gap between ELs and their English-speaking peers. Milner (2013) expressed problems of achievement opportunity gaps, which are issues of persistent societal biases that have produced educational disparities among diverse groups of students. Irvine (2010) proposed that educators must consider closing other gaps, including:

The teacher-quality gap, the teacher-training gap, the challenging curriculum gap, the school-funding gap, the digital-divide gap, the affordable-housing gap, the health care gap, the employment-opportunity gap, the school-integration gap, and the quality child-care gap. (p. xii)

Research shows that students reading on grade level by third grade have a higher graduation rate, which in turn leads to future success through employment rates (Department of Education, 2019; Fiester, 2013). The purpose of this quasi-experimental study was to determine if the software intervention program, Imagine Learning Language and Literacy (IL), implemented in a Midwestern urban public school district resulted in higher levels of English language proficiency, as well as reading achievement in third grade ELs. English language proficiency is determined by the state English language proficiency assessment; reading achievement is defined as demonstrating grade level reading proficiency as outlined by the state assessment program..

The review of the literature was conducted through several databases including Google Scholar, ERIC, JSTOR, and EBSCO as well as relevant books, articles, and reports. The key search terms used were *language acquisition*, *language acquisition theories*,

bilingual education, program and instructional models for ELs, English Only movement, court cases, English Language Learners, behavior reading theory, phonics, predictors of reading achievement, Computer Assisted Language Learning (CALL), and computer software intervention. References cited in each article reviewed were also explored to see if they warranted further review to meet the need of the research. The research on CALL regarding literacy instruction for ELs is lacking. A search in EBSCO for CALL alone yielded 10,591 potential studies, yet, when reading instruction and English Language Learners was added, only 17 studies were produced, and only eight pertained specifically to CALL. Notably, none of the studies pertained to the United States; most were studies on English as a Foreign Language. The lack of literature therefore exemplifies the need for this study.

This chapter is a review of the literature pertaining to three topics as they relate to improving opportunities for learning of ELs. First, the theories, approaches, and methods of second language acquisition are explored from historical and contemporary standpoints. The attention to this literature sets the foundation for the different instructional and curriculum program models utilized in schools, and the impact or effectiveness of these approaches, methods, and models on reading achievement. Secondly, the historical landscape of language in the United States is explored through the political and social forces that have shaped policies that impact the education of ELs. The chapter concludes with the final topic, Computer Assisted Language Learning (CALL), which examines the technological approach that school districts have tried to meet accountability measures and increase opportunities for learning of ELs. The focus of chapter two—deficit thinking theory, LatCrit theory, and behaviorist reading theory—contributes to the understanding of the literature undergirding this study.

Second Language Acquisition, Programs, and the Impact on Reading Achievement

To fully comprehend the problem guiding this study, one must comprehend how language is acquired, specifically how a second language is acquired. All children have language; the components of language are phonology, orthography, syntax, semantics, morphology, pragmatics, and discourse (Chen & Mora-Flores, 2006; Herrera & Murry, 2016). ELs, however, move through a series of stages as they acquire another language: the pre-production (or silent phase), early production, speech emergence, intermediate fluency, and nativelike, or advanced fluency (Chen & Mora-Flores, 2006; Herrera & Murry, 2016). While the development of English for those who have it as their first language is a natural process, for those who have a different first language and are learning English for the first time in a school setting, the acquisition of English needs to be supported (Chen & Mora-Flores, 2006; Herrera & Murry, 2016). How the support is provided is where the debate surfaces regarding which theory, approach, or method is the most effective. Much like the literature supporting learning and reading theories, the literature surrounding the acquisition of a second language is multi-faceted (Herrera & Murry, 2016; VanPatten et al., 2020).

Second Language Acquisition

The literature on language acquisition is like the progression of learning and reading theories, because language and literacy are explicitly linked with one another. VanPatten et al. (2020) posited that the attempts to apply theory to second language acquisition stem from the need to explain why some individuals learn at a quicker pace than others; and that there is a need to try to produce a single theory to explain all the observed phenomena and make predictions about the best method to acquire a second language. Research has determined that there are three major theoretical perspectives to the development of language, which

have then supported the development and acquisition of a second language: behaviorist, innatist, and interactionist (Herrera & Murry, 2016; Mohamad Nor & Rashid, 2018). Other research has categorized the theoretical perspectives to second language acquisition as structural, functional, cognitive, and interactional (Lavadenz, 2011). The predominant second language acquisition theories that are explored as they relate to this research are behaviorism, nativism, constructivism, and cognitivism. Approaches to second language acquisition are grounded in theory, which are then applied through methods and strategies of instruction (Herrera & Murry, 2016).

The historical perspective of second language acquisition begins in behaviorist theory, which was driven by the work of Skinner. Second language is acquired the same way first language is acquired (Herrera & Murry, 2016). In behaviorist theory, the focus was on memorization and drills. and the approach to teaching second language was termed as grammatical, with the method of grammar translation; explicit teaching of the rules of language, and no usage of first language in attaining the second (Herrera & Murry, 2016; Lavadenz, 2011; Mohamad Nor & Rashid, 2018; VanPatten et al., 2020). Based on stimulus and response, a core construct of behaviorist theory, “language...was a product of repetitive reinforcement of anticipated responses” (Aljumah, 2020, p. 201). As this perspective began to be challenged, Chomsky suggested an alternative thought with his nativist or innateness theory, which proposed the concept of universal grammar. Human beings have a universal or natural innate ability to learn language, both native and second; they are, according to Chomsky (1986), born with a language acquisition device (LAD), which is the mental system devoted to language learning (Herrera & Murry, 2016; Mohamad Nor & Rashid, 2018;

Schulz, 1991). This theoretical assertion challenging the behaviorist perspective, led to the constructivist theory to language acquisition.

Constructivism is based on the premise that learning happens because of the interaction between the environment and the learner's mind and is aligned with the communicative approach (Herrera & Murry, 2016). It is sometimes referred to as discourse or interactionist theory. Communication is the key; therefore, students must interact with one another to acquire the target language (Herrera & Murry, 2016; Lantolf et al., 2020; Lavadenz, 2011; Mohamad Nor & Rashid, 2018; Schulz, 1991). While the behaviorist theory had the teacher at the center of learning, now the student is seen as the center, as they are active participants in the development of language, and through a natural setting (Herrera & Murry, 2016; Schulz, 1991). The early works of Vygotsky helped shaped the constructivist theory, also known as social constructivist theory, where interpersonal interactions lead to language and cognitive development. One of Vygotsky's best-known constructs is the Zone of Proximal Development (ZPD), defined as:

the distance between the actual developmental level [of a person or group] as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (Vygotsky, 1978, p. 86)

This is where optimal learning occurs—in the gap between what the learner knows and what the learner can accomplish with assistance (Vygotsky, 1978). Vygotsky (1987, as cited in Lantolf et al., 2020) also addressed the difference between implicit and explicit knowledge; implicit is the non-conscious knowledge gathered in everyday life, while explicit comes from intentional and systematic instruction in school.

Aligned with this theory is Krashen's monitor model theory, which is comprised of five hypotheses. First is the acquisition-learning hypothesis, where language acquisition is viewed as a subconscious process, while language learning is a conscious process. The natural order hypothesis asserts that language is acquired in a predictable order. Next, the monitor hypothesis suggests that learners are thinking and monitoring the production of language. The input or comprehension hypothesis states that we acquire language that is comprehensible or understood. Within the input hypothesis is the concept of $i+1$; the potential for learning lies in using what is already known in order to acquire the next structure. Last, the affective filter hypothesis postulates that the amount of input received is determined by several affective variables, such as the anxiety or motivation of the learner (Krashen, 1985, 2003). Krashen's monitor model can be viewed as an innatist perspective to theories of language learning, due to the subconscious and conscious processes (Mohamad Nor & Rashid, 2018).

Cognitive theory views second language learning as a "mental process, leading through structured practice of various component subskills to automatization and integration of linguistic patterns" (Shulz, 1991, p. 20). There is a learner-centered focus, much like in the constructivist theory, with explicit teaching and modeling of learning strategies and language for communication (Herrera & Murry, 2016). Cummins (1991, 1992) posited theoretical constructs in reference to cognitive challenges learners may face communicating in a second language within an academic setting. These include three processes: development of communicative competence in the target language; different cognitive and contextual demands on language competence; and the correlations between first and second language development. There are two intersecting continua of tasks: either context-embedded, where

there are supports for the learning, or context-reduced, where there is no assistance, resulting in tasks being cognitively demanding or undemanding.

Contemporary theories of second language development are still grounded within both cognitive and sociocultural perspectives (Herrera & Murry, 2016; Lavadenz, 2011). Both support interaction between the learner and the environment. Lavadenz (2011) posited that the combination of the theories provides a “powerful construct that helps inform instructional practices for English learners” (p. 29). These theories draw on several instructional strategies promoting interaction and utilization of the learner’s funds of knowledge: “the cultural, linguistic, and historical resources that students bring with them to the school setting” (Lavadenz, 2011, p. 29). Lantolf et al. (2020) provided a list of observations pertaining to sociocultural theory of second language acquisition, which included exposure to input is necessary, and much of second language acquisition occurs incidentally. They also concluded that the current research on sociocultural theory has focused on “the intentional development of second language ability through systematic explicit instruction” (p. 241).

The theoretical perspectives of second language acquisition are the foundations for the practices delivered in the classroom. The research on which perspective is most effective is associated with the type of program implemented and the impact it has on reading achievement. They are implemented based on program models of instructional delivery; therefore, the different program types are explored next.

Language Programs

The type of language program implemented varies across the nation, since there are no policies or mandates as to which specific program should be utilized; each state and

district determines their needs based on a variety of factors, including student characteristics and needs, teacher capacity, state policies, and research, while also ensuring that the selected program is backed by scientific evidence (Sparks, 2016; Sugarman, 2018). Programs are plagued by adaptations, while keeping the name, or creating an entirely new name that educators think better represents their approach to instruction. This often confuses the field, which then leads to doubts and ambiguities regarding how a second language is acquired (Aljumah, 2020; Sugarman, 2018). The two major program types that were explored were dual language and English only.

Dual Language

Dual language is defined as a type of program in which the goal is for students to develop proficiency in English as well as the partner language (Baker et al., 2016; Garcia, 2009; Sugarman, 2018). The program instructional models served through this category are developmental (or maintenance), bilingual, foreign language immersion, two-way (or dual), immersion, and heritage language immersion (Sugarman, 2018). Sugarman (2018) also found that the dual language approach is additive in nature in that it maintains the native language while developing proficiency in the target language; while Herrera and Murry (2016) stated that while it is the most effective model, concerns with staffing the program can cause districts without necessary resources to avoid it as a viable option for their ELs. It is also important to understand that not all dual language instructional approaches are designed to serve ELs; the two that serve ELs are developmental bilingual and two-way immersion (Sugarman, 2018). Developmental (or maintenance) bilingual programs consist of ELs who share the same native language; they are implemented beginning in elementary school. Students begin in Kindergarten and first grade with academic subjects being taught in both

English and students' native language. Subsequent grade levels are added for as long as the school district can support (Herrera & Murry, 2016). Originally named maintenance bilingual, developmental programs were introduced through the 1984 Elementary and Secondary Education Act "in order to avoid negative political association linked to the notion of first language maintenance" (Genesee, 1999, p. 19).

Because of research documenting that dual language is the most effective type of program model with the bilingual instructional model, Morita-Mullaney et al. (2020) examined the impact of dual language programs on 162 EL students from elementary to middle school in an Indiana school district, who were either enrolled in a dual language or an ESL program. Three data sources were examined: state assessment scores, course schedules in seventh and eighth grades, and their classifications in dual language or ESL courses. The analysis was conducted in two phases: the first was multivariate outcome, two-level cross-classification analysis; the second was multivariate, multi-level cross classification. The results of the state assessment analysis indicated a "clear language effect in ELA, as emergent bilingual students in the [dual language] program outperformed those in the ESL program," while also performing better in their core academic courses in middle school (p. 704). Yet, the significant finding was that while one would assume that the trajectory of the dual language students would create better opportunities in high school, this was not the case. The dual language students took 10% fewer elective courses compared to those who were in the ESL program, which suggested exclusionary tracking patterns. This pattern would then impact their future advanced placement opportunities in high school. Therefore, while the dual language instructional model is additive, which supports the maintenance of the native language, in educational settings, it can be downplayed. In contrast, however, Calderon et al.

(2011) posited that what is necessary for ELs is just sound instructional practices, not necessarily the model; it is “the quality of instruction [that] matters most in educating English learners” (p. 103). Rolstad et al. (2005) conducted a meta-analysis of 17 research studies of program effectiveness on ELs by coding based on effect sizes. The findings demonstrated that bilingual—specifically developmental—was consistently superior to English only approaches.

English Only

English only is defined as a type of program where the only goal is proficiency in the English language. Program models served through this category include but are not limited to Sheltered English instruction and ESL (Baker et al., 2016; Garcia, 2009; Sugarman, 2018). English only programs are also considered to be subtractive, with the goal of English language proficiency only (Sugarman, 2018). Students are immersed in the general education classroom and receive support from modified instructional practices or an ESL teacher (Garcia, 2009; Sugarman, 2018). Often confused with and sometimes referred to as immersion programs, English only programs are considered submersion (Cummins, 1979). English only programs are the most utilized programs due to the ease of implementation and cost-effectiveness (Jochum, 2011). Sheltered English instruction is one popular approach within the English only program type, in particular the Sheltered Instruction Observation Protocol (SIOP) model, which is grounded in sociocultural theory (Mcintyre et al., 2010). Echevarria et al. (2017) developed SIOP to support language instruction within the content through the utilization of eight components: lesson preparation, building background, comprehensible input, strategies, interaction, practice and application, lesson delivery, and review and assessment. Within the model, the role of promoting academic literacy is

essential (Short, et al., 2011). Cummins (1981, 1992) also promoted academic literacy; specifically, common underlying proficiency (CUP), basic interpersonal communication skills (BICS), and cognitive academic language proficiency (CALP). CUP demonstrates that while on the surface, students L1 and L2 are separate; underneath, there is a system that connects both languages (Cummins, 1981). The distinction between BICS and CALP is that while ELs pick up the basic social language of English within one to two years, it takes anywhere from five to seven years or even more for a student to become fully academically literate in English (Cummins, 1992).

A mixed methods study by McIntyre et al. (2010) in a large urban Midwestern school district examined the reading achievement growth of 50 kindergarten through fifth grade ELs in classrooms of 23 teachers who had been trained in the SIOP model. Teachers were trained in the SIOP model over a duration of 18 months prior to data collection and analysis. After the professional development training on the model, teachers were observed based on the model protocol for full implementation of the eight SIOP components. Only seven of the 18 teachers were identified as fully implementing the model. The analysis of the data was a factorial experiment utilizing one-way analysis of variance on student performance on the reading test scores of the Predictive Assessment Scale, which has high correlation with the state assessment test given in the school district. The findings demonstrated that students who were in the treatment group benefited significantly more than those students who were not; yet the results “indicated no statistically significant differences in the PAS Reading test scores between the treatment group and the comparison group” (p. 344). The authors stated the lack of significance could be due to the limited sample size as well as other intervening variables.

While the overall research does not support the English only approach to instruction of ELs, Upton (2007) conducted a mixed methods program evaluation to examine the instructional effectiveness of the ESL program at Perdue University in Indiana. Reviews of test results that impacted placement decision, interviews with staff and students, course goals and final grades were utilized. The findings “suggested that [the] program was successfully preparing ESL students for academic success” (p. 11). It is of note that this research was limited in the scope as well as the effectiveness of reading achievement for K-12 ELs. Valentino and Reardon (2015) looked at the differences in academic achievement trajectories of over 13,750 ELs in a large urban district from elementary to middle school between 2001–2002 to 2009–2010 of four different program models: English immersion, transitional bilingual, developmental bilingual, and dual immersion. Utilizing four separate random hierarchical linear models with and without student controls, the findings demonstrated that the test performance scores in ELA of students in bilingual programs grew faster than those of students in the English immersion program. Similarly, through their literature synthesis of 13 empirical studies, Polanco and Luft de Baker (2018) compared the reading outcomes of transitional bilingual and two-way bilingual programs, as well as comparing both bilingual programs to English-only programs. Three major findings were determined: students in any form of bilingual program performed equally to their English-only peers; comparing transitional bilingual to two-way bilingual, students in two-way bilingual had faster growth in reading measures; and all students in a two-way immersion program benefited from the program.

As referenced, there is either an additive or subtractive nature of the program regarding native language. While the research supports the additive model, the program

model that is most prevalent. English only, is subtractive. This aligns to the deficit versus asset thought to languages other than English; Cummins (1979) referenced this as “the L1 of the minority language child...is often viewed as the cause of his academic difficulties and an impediment to his learning of L2” (p. 225). The goal is to accelerate the proficiency in English in schools due to policies that are examined in the next section; as Cummins (1979) referenced, native language gets in the way of this progress. Program models also influence the curriculum that is provided to students. Districts with the financial capability to offer the additive program models often opt for ones that also support English-speaking students, while those without resources are forced to rely on the subtractive models. As Ladson-Billings and Tate (1995) specifically linked property to curriculum, they asserted that curriculum is available to students based on their social positions. Types and amounts of curriculum resources and course offerings such as language program models are examples of curriculum related to property (Ladson-Billings & Brown, 2008).

The term maintenance bilingual was changed to developmental bilingual to avoid negative political associations. Valdes (2005) further supported this link through LatCrit, discussing the continued marginalization and invisibility of Latinx students; the prevalence of the subtractive model of English only marginalizes the language of ELs. Whichever program model is implemented, and whatever theory, approach, or method is utilized, there is an impact on the acquisition of a second language, specifically English, which is measured by English reading proficiency.

In conclusion, second language acquisition is complicated and has no one way to best explain its process (Mohamad Nor & Rashid, 2018; Schulz, 1991). The research states acquisition of English takes anywhere from five to seven years to fully be academically

literate for those who possess native language literacy; yet the history of our country in reference to those who do not speak English has perpetuated the deficit perspective of language, as well as supporting power structures to keep ELs marginalized and pushing the acquisition of English as soon as possible. The literature on second language acquisition is based on the effectiveness of programs and instruction as determined by performance on academic achievement, specifically, English reading proficiency achievement. Research supports bilingual program models, as they are additive and asset-based instructional programs. Yet most ELs are enrolled in English only models with a subtractive, or deficit view of native language, with the push to gain academic English proficiency as soon as possible. Why is there this discrepancy? To answer this question, it is necessary to fully understand the nature of the history of language learners in our nation and the policies that have shaped the financial and political landscape of language in education.

Historical Landscape of Language in the United States

The history of immigration in the United States has been shaped by political, social, and economic forces. These forces have impacted language policies and practices (Baker et al., 2016; Lopez et al., 2015). This section explores the historical and contemporary aspects of language in the United States through language policies and the historical and contemporary influence of the courts in the educational rights of immigrants.

Historical Overview

During the 1960s, America was in the midst of the Civil Rights Movement. Groundbreaking legislation, the Elementary and Secondary Education Act (ESEA), was passed in 1965. Soon after, the Bilingual Education Act, Title VII of ESEA, was passed in 1968. While to many this was seen as an attempt to provide adequate education to immigrant

children, funds were restricted to schools that had high concentrations of limited English-speaking students who came from families with annual incomes below \$3,000 (Punches, 1985). Prior to this hallmark event, however, there was a pattern of marginalization of immigrant groups in our country that demonstrated why such a restriction of funds were part of the Act.

Kloss (1971) posited that the dominant ethnic groups felt that immigrant groups must give up their language as soon as possible through four arguments or theories: tacit theory, take-and-give theory, antighettoization theory, and theory of national unity. The theory of national unity “holds that immigrant groups which perpetuate their language thereby may easily become a politically disruptive force...as a result [the] host country [has] the right to require linguistic assimilation among immigrants” (Kloss, 1971, p. 254). Evidence of this national unity theory can be seen as early as the 1750s, when German immigrants expressed an unwillingness to give up their language and culture; and early political influencers, such as Ben Franklin, saw this as a threat, while John Adams suggested that English would be the next world language (Baron, 1990; Stalker, 1988). This sentiment towards languages other than English continued into the early 1900s, called the Americanization Period. During this time laws were passed, such as the National Origins Act of 1924, which closed the United States borders to immigrants from northern Europe (Lleras-Muney & Shertzer, 2015). In 1919, the state of Nebraska passed the Siman Act, which prohibited any language other than English being taught in a public or private school, This led to the 1923 court case, *Meyer v. Nebraska*, in which German immigrant groups fought for the right to use their native language as well as the right to receive an education. This case established precedent that the 14th Amendment provided protection for language minorities and laid the foundation for

subsequent court cases (Jochum, 2011; Wright, 2010). Also, during World War I, many states passed compensatory attendance and language laws. Lleras-Muney and Shertzer (2015) examined 1910, 1920, and 1930 census data on enrollment, employment, and literacy and fluency to determine the effects of Americanization laws on immigrant children. A probit model was applied to three cross-sections of the census data. The findings showed that while there was an increase in attendance, the laws had a small and insignificant effect on literacy and English fluency (Lleras-Muney & Shertzer, 2015).

In 1965, President Johnson signed the Immigration Act, which revoked previous immigration policies that closed the United States and or set quotas. During this same year, Congress passed the Elementary and Secondary Education Act (ESEA), which provided funding for schools that served low-income students (Baker et al., 2016; Lopez et al., 2015). This led to the passage of Title VII of ESEA, known as the Bilingual Education Act of 1968. This act was intended to assist school districts that had immigrant students who did not speak English; school districts could apply for funds to purchase programs and train teachers. However, there was no language in the Act designating bilingual education programs as the way to serve immigrant students (Baker et al., 2016). This was challenged in the 1974 court case, *Lau v. Nichols*.

Lau v. Nichols became one of the most important court decisions for language minority students. Brought forth in California by Chinese-speaking immigrant students, *Lau* claimed that students were denied access to an education by school districts that made no effort to accommodate their needs (Gándara et al., 2004). While the court did not find a violation of the 14th Amendment, it did find that the school district had violated Title VI of the Civil Rights Act. Through the Office of Civil Rights, language discrimination is national

origin discrimination. *Lau* established that schools should provide bilingual education when feasible (Gándara et al., 2004). Therefore, in 1974, the reauthorization of the Bilingual Education Act included reference to bilingual education programs. Between 1978 and 1988 other reauthorizations to the Bilingual Education Act began to include language on immersion programs, leading to subsequent landmark court cases (Lopez et al., 2015).

Casteneda v. Pickard in 1981 took language education protection further. Through this ruling, a three-pronged, science-based test was established as guidance regarding language programs. As districts establish programs, they must: “be based on sound educational theory; have adequate resources for the program; and provide continuous assessment to determine if students’ English language deficits are being addressed” (Sutton et al., 2012, p. 30). Through yet one other case, *Plyer v. Doe* in 1982, the Supreme Court established that states cannot deny students a free and appropriate education based on their immigrant status, thereby ensuring that immigrant students had equal access (American Immigration Council, 2016).

These legal efforts established policies to protect the language rights of immigrant groups in education. While one would assume that the established findings of the courts set the precedent for education rights of immigrant students in the United States, there were still forces that challenged these decisions. *Guardians Association v. Civil Service Commission* in 1983 and *Alexander v. Choate* in 1985 are cases that challenged *Lau*’s precedent. Although the cases were not connected to education, each case was brought citing discrimination through Title VI (Gándara et al., 2004; von Spakovsky & Butcher, 2020). In *Guardians*, the court found that Title VI only dealt with purposeful wrongs and intentional discrimination; in *Alexander*, “the court indicated that while Title VI itself did not support a disparate impact

claim, agency regulations could rely on this theory of liability” (Gándara et al., 2004, p. 34). Gándara et al. (2004) suggested that since the *Lau* decision, other political forces have been working to undo the provisions, while families are losing the courts as a leverage in dealing with state and local policies. One of the most divisive political forces was the English Only Movement.

The English Only Movement

The English Only movement of the 1980s and 1990s brought the marginalization of immigrant groups into recent history with attempts to make English the national language of the United States. Amendments were presented in Congress in 1981 and 1988 which would require immigrants to learn English (Baron, 1990). While the efforts to establish English as the national language did not come to fruition, several states passed their own language laws (Baron, 1990). Similar to the study conducted by Lleras-Muney and Shertzer (2015) on English only laws during the Americanization period, Marschall et al. (2011) conducted a study to examine if state-adopted English Only language laws had an impact on how schools educated EL students. Utilizing data on school language instructional practices from the federal Schools and Staffing Survey (SASS) over a period of five years from 1987 to 2004, the findings of this study demonstrated that English Only laws reduced “the likelihood that schools offer native language instruction and [increased] the likelihood that they rely strictly on ESL (English as a Second Language) methods or provide no special instruction for ELL students at all” (Marschall et al., 2011, p. 602). Efforts to establish English as the official language are seen as politically motivated to maintain power and create a sense of national unity and patriotism (Baron, 1990; Marschall et al., 2011; Roberts Auerbach, 1993, 2016; Stalker, 1988; Wiley & Lukes, 1996).

These two moments in history, the Americanization period and the English Only movement, demonstrate the sentiment that language is inherent not only to culture, but is tied to political means; and that language itself, when it is not English, is viewed as a deficit (Baron, 1990; Wiley & Lukes, 1996). These historical moments have also set the stage for the contemporary policies that have shaped and continue to shape the education of ELs in the United States.

Contemporary Policies Shaping the Education of ELs

While historical court cases have attempted to establish rights for immigrants in education, contemporary policies have shaped the educational landscape and pushed the pendulum in the opposite direction. According to Roberts Auerbach (2016), “forces external to the classroom seem to be shaping practices inside the classroom even more strongly than ever” (p. 936). This is exemplified through the passage of the No Child Left Behind Act of 2001 and funding implications for ELs.

No Child Left Behind Act (NCLB)

With the passage of the No Child Left Behind Act (NCLB) of 2001, a change was issued to the Bilingual Education Act of 1968; specifically, decreased federal funds for bilingual education to focus on English acquisition. Title III had replaced Title VII, and the English Language Acquisition, Language Enhancement and Academic Achievement Act was established. The focus now was on English learning, and EL students were now to take the same accountability assessments in English as their English-speaking peers. Lleras-Muney & Shertzer, 2015; Menken, 2010). NCLB’s key provisions in regard to ELs are to develop academic content standards and English language proficiency standards that are linked to the state content standards; design valid and reliable assessments that are aligned with both the

academic content and language proficiency standards; disaggregate annual assessment data by subpopulations, one of which is ELs; allow school districts to determine the method of instruction for ELs, but it must be tied to scientifically based research; and establish annual measurable achievement objectives (AMAOs) for English language proficiency (Garcia, 2009; U.S. Department of Education, 2002).

One of the components of NCLB was the portion of the law that imposed penalties for Title I schools that did not make Adequate Yearly Progress (AYP). Title I schools were identified based on their percentage of free and reduced lunch students—schools with extreme poverty rates. A school that did not meet AYP, based on just one subgroup of students such as ELs, could be subject to citations, which included eventual takeover by the state. The financial aspects of these changes also pushed for the focus on English learning. Title III funds were only to be utilized as supplemental funds with the goal of increasing English language proficiency (Okhremtchouk, 2017). As a result, many schools no longer invested in bilingual programs, in the belief that English only instruction would ensure that ELs make their adequate yearly progress (Menken, 2013).

To some who thought that NCLB brought forth much needed change in how school districts address all learners, highlighting the fact that most students of color and poverty had been performing well behind their grade level peers, this era of accountability could be seen as a positive change (Caruthers & Friend, 2016). Haycock (2006) lauded NCLB, stating, “thanks in large measure to the spotlight that NCLB has focused on the performance of all students, the United States is gaining some traction in overcoming the deep inequities that have plagued public education for far too long” (p. 42). However, other research has shown the negative impact that high stakes accountability testing has had on ELs. Alvarez and Corn

(2008) conducted action research comparing ELs in each of their classrooms who were recently reclassified as English fluent and current ELs performance during the 2004–2005 school year in an elementary school located in an urban district in northern California. Due to the recent designation of the district being low performing and in need of program improvement, per NCLB, the district adopted Open Court as their reading curriculum and assessment in lieu of the previous authentic reading assessment, the Quality Reading Inventory (QRI). Noting that their research was narrow in scope, the authors analyzed the district’s performance over a three-year period. While the overall data showed that there was an increase in the district’s English language arts scores, closer examination showed that the learning gaps between those ELs who were reclassified as proficient in English and those designated as ELs had widened from 2003–2004 to 2005–2006.

The recent reauthorization of ESEA, now Every Student Succeeds Act (ESSA) of 2015, still has the requirements that ELs must take accountability assessments in English and perform at the same level as their non-EL peers, as well as English proficiency assessments. While most states have moved away from the harsh language of NCLB with state takeover, there is still a level of accountability for Title I schools—schools with elevated levels of poverty—to show academic progress. Like Alvarez and Corn’s (2008) action research study, Miley and Farmer (2017) examined the performance levels of 302 elementary and middle school students in one rural Tennessee school district during the 2015 school year. Two hundred students were ELs who achieved exit criteria on the state language proficiency assessment, and 102 were non-ELs. Utilizing independent t-tests, the results of the state English Language Arts and Math assessments were compared. The findings showed that the

English Language Arts scale scores for ELs were significantly lower than those who were non-ELs.

Menken and Solorza (2014) examined the impact of NCLB accountability measures in 10 New York City schools where there had been a loss of bilingual programs over a decade. They specifically inquired as to why bilingual programs had fallen out of favor with school administrators. New York City schools uniquely allowed each individual school to determine their language program. City policy had historically supported bilingual programs; there had been a decrease in those enrolling in those programs and an increase in ESL programs from 2002–2003 to 2010–2011. Through interviews with 20 participants, principals, assistant principals, and teachers, the researchers found several key factors as to why schools had eliminated their bilingual programs, including: poor performance by emergent bilinguals on accountability assessments and measures created tremendous pressure for administrators; bilingual programs were blamed for the poor performance, not due to data, but due to ideology and beliefs; and the accountability system penalized the students as well as the schools they attended with the term “low performing.”

Together, the studies conducted by Alvarez and Corn (2008), Miley and Farmer (2017), and Menken and Solorza (2014) showed the disparity in the provisions of ELs demonstrating content academic level proficiency as required by NCLB and its subsequent form of ESSA. Cummins (2016) further supported this sentiment by reinforcing his distinction between BICS and CALP:

both constructs have highlighted various forms of educational malpractice and pointed in the direction of more evidence-based policies and instruction. For example, the BICS/CALP distinction drew attention to the reality of inappropriate and invalid L2 assessment of English language learners...[in] large-scale, high stakes

standardized testing (e.g., as mandated by the No Child Left Behind legislation in the United States). (p. 942)

The deficit language of the NCLB constructs by labeling schools as “low performing” exacerbated the way ELs were instructed through English only programs. Besides creating two accountability assessments for ELs, NCLB also changed the way funding from the federal level could be utilized for ELs.

Funding Implications

Okhremtchouk (2017) described the difference between horizontal equity finance in education, which supports funding through the equal treatment of equals; to vertical equity finance, which supports that those with unique needs require additional funding. The previously mentioned court cases of *Lau*, *Castenda*, and *Plyer* focused on the educational needs of immigrants within the classroom; other cases focused on the disparity in funding for education of immigrants. Hoffman et al. (2013) described the cases as either focusing on equity or adequacy of funding, while Rose (2015) depicted school funding cases in three waves. The first wave was held in federal courts, in 1973. The seminal federal court case of *Rodriguez v. San Antonio* focused on the disparities of property taxes as the base funding is local districts. In the second phase, the cases were litigated in the state courts, rather than federal. *Serrano v. Priest* in 1976 “led the way for most states to [revamp] their school finance structures to be more equitable” (Hoffman et al., 2013, p. 1). While those cases focused on equity, the wave of adequacy suits, also known as the third wave of litigation, began with the seminal case in Kentucky of *Rose v. Council for Better Education* in 1989, in which the court “extended the reach of school finance litigation by finding the entire education system inadequate” (Brimley et al., 2016, p. 223). The *Rose* case also established

seven *Rose* competencies required to determine adequacy in funding (Rose, 2015). Litigation for adequacy in funding had become the way to circumvent state legislatures to ensure increased school funding (Rose, 2015).

Brimley et al. (2016) maintained that a majority of states have a weighted approach to address the needs of ELs, which provides additional resources to address their unique needs. Yet, Okhremtchouk (2017) contended that while “well intended, weights are harder to determine and navigate through since [it] is not exactly a straightforward entitlement program where the dollar amount is directly tied to one specific subgroup and its need” (p. 13). School funding is a political issue and can be seen through the back-and-forth school finance climate in the state in which the current study is conducted (Hoffman et al., 2013). Between the 2000–2001 to 2010–2011 school years, the state of Kansas experienced a 164% growth in ELs (Douglass Horsford & Sampson, 2013). With this data alone, it would be expected that the state would begin to invest in this increasing population to ensure academic success; yet Hansen and Johnson (2017) presented a session on Kansas school finance, noting how school districts across the state have fought through the courts since the early 1970s in *Caldwell v. State of Kansas* for adequacy in funding. Two other major court cases in the state, *Montoy v. Kansas* and *Gannon v. Kansas*, both argued that the state legislature was not adequately funding schools. Under the governorship of Sam Brownback, the state legislature instituted block grant funding in 2015. During school years 2015–2016 and 2016–2017, funding was set at the 2015 base of \$3,852 per pupil annually; districts that had increases in enrollment received no additional funding beyond the base (Kansas Legislative Research Department, 2019; Rauscher, 2020).

It would seem, then, that the supplemental approach to Title III of NCLB would provide adequacy in the education of ELs; yet this has not been the case. Aleman (2007) used a critical race policy analysis of the Texas school finance policy to identify the racial effects that the funding had on seven majority-Mexican American school districts. Utilizing critical race and LatCrit as the theoretical framework to conduct the policy analysis from data in 2002–2003, Aleman found that there was a continued reliance on property in determining funding at the local level which bore “racialized effects” (p. 541).

The historic and contemporary policies regarding the education of ELs can be seen as an assimilationist, monolingual discourse (de Jong, 2013). They are concerned with the nation-state along with a unifying language and national culture, much as Kloss (1971) posited with the national unity theory. “Assimilationist language in education policies and programs focus on teaching English. The students’ native languages may be tolerated, but not with the intent to develop or maintain” (de Jong, 2013, p. 101). Throughout the nation’s history, the push for English as the unifying language has been exemplified. Even more recent, contemporary policies have centered on the attainment of English as the goal. NCLB and its successor, ESSA, demonstrate these ideologies. It is here, beginning with NCLB and continuing with ESSA, that school districts have turned to interventions to improve the likelihood that ELs will perform at grade level proficiency and therefore, allow the district to meet the accountability demands. Caruthers and Friend (2016) asserted that “the legislation [of NCLB] reinforces deficit thinking and stereotyping certain students as being in need of intervention” (p. 63). Many of the interventions have been computer assisted; therefore, Computer Assisted Language Learning (CALL) is explored next in an attempt to close the opportunity gap for ELs.

Computer Assisted Language Learning (CALL)

The landscape of education continues to evolve, and technology has proven to enhance the nature of instruction as well as learning. As education has moved into the 21st century, technology has become a necessary facet of teaching and learning. Computers are now seen as another teacher in the classroom, as they can enhance student achievement. Specifically bringing technology to language learning, Computer Assisted Language Learning (CALL) has been defined as “the search for and study of applications of the computer in language teaching and learning” (Levy, 1997, p. 1). Computer Assisted Language Learning (CALL) is derived from Computer Assisted Instruction (CAI), Computer Assisted Learning (CAL), and has been recently named Technology Enhanced Language Learners (TELL) (Chambers et al., 2011; Davies et al., 2012; Lodhi et al., 2019; Shafaei, 2012). Originating in the 1960s, CALL has been intertwined with learning theories and changes as theories evolve in the educational landscape; and as technology has advanced, so does computer software (Davies et al., 2012; Yigitcan Baden & Demiray Akbulut, 2019). It is important, however, to note that some researchers state that CALL is a tool, not a method (Lodhi et al., 2019; Shafaei, 2012).

Through a year-long study, Chambers et al. (2011) examined how computer assisted tutoring impacted the lowest scoring 20 first and second grade struggling readers in 33 extreme poverty Success for ALL schools across nine different states. Schools were randomly assigned to receive either the treatment or control. Through multivariate analysis of covariance (MANCOVA), it was determined those students receiving the treatment scored significantly higher on the posttests than those schools in the control. Research also demonstrates that the use of CALL increases reading achievement for ELs. Macaruso and

Rodman (2011) examined the use of a CAI, Lexia Early Reading and Lexia Primary Reading program enrolled in a bilingual classroom in a rural Texas school district to determine whether CAI benefited ELs enrolled in a bilingual class. Of 79 Kindergarten EL students, 39 received the CAI treatment.. Data analyzed through independent t-tests, one-sample t-tests, and ANCOVA showed that the ELs who received the treatment had significantly greater achievement than the control group. Several tenets of CALL are identified in its historical underpinnings.

Historical Tenets of CALL

As stated, CALL has derived from and continues to grow through many different names: Computer Assisted Instruction (CAI), Computer Assisted Learning (CAL), and most recently, Technology Enhanced Language Learning (TELL). Despite the name, CALL research has shown that CALL is aligned with and continues to change as learning theories change and progress (Davies et al., 2012; Yigitcan Baden & Demiray Akbulut, 2019). As mentioned, the history of CALL is intertwined with theories of learning as well as language acquisition and is therefore seen as a consumer of theories (Hubbard & Levy, 2016).

Beginning in the 1960s, the predominant learning theory was that of behaviorism, while the predominant language acquisition theory was that of audio-lingual English teaching. CALL was supported through explicit grammar translation, as well as drill and practice; the computer provided immediate feedback (Akayoglu, 2019; Warschauer, 1996; Yigitcan Baden & Demiray Akbulut, 2019). Advancing to the 1970s and 1980s, learning theory shifted to a communicative approach, and language teaching also followed. Grammar was taught implicitly, and the computer was either a tutor, stimulus, or a tool (Warschauer, 1996). Moving into the 1990s and beyond, integrated learning theory began to focus on

social contexts, and as such, language teaching was supported through socio-cognitive approaches. During the 1970s and 1980s, the microcomputer was utilized to support instruction; yet, with the advent of multimedia PCs during the 1990s, “CALL has progressed from drill and practice exercises targeting grammar and vocabulary towards a wide array of sophisticated interactive programs for reading” (Davies et al., 2012). It is of note that as technology advances, CALL stalls slightly so program designers can adapt, then shifts to support language instruction (Yigitcan Baden & Demiray Akbulut, 2019).

The explicit connections with CALL and language acquisition, much like what occurred with the changes in reading theories, can be seen with a focus on the learner, in that CALL was able to move the focus away from instruction to the focus on the learner (Levy, 1997; Smith & Craig, 2013; Waters, 2007). CALL has been shaped by language pedagogy and language acquisition, which has allowed for the creation of programs that focus on all four domains of literacy (Davies et al., 2012). Levy (1997) also posited that the language acquisition process should direct CALL research and development. Waters (2007) noted that the development of software, specifically animation, graphics, and videos, has allowed text to become more accessible to the learner. Zhou and Wei (2018) conducted a review of the literature of 66 different research studies based on the criteria of language learning skills, language subsystems, and self-regulated learning in technology-enhanced language learning (TELL) contexts. The research showed much of the literature supported the domains of listening, reading, and writing. According to Zhou and Wei (2018), “one distinctive technology feature of reading online is the interactivity between learners and texts” (p. 474); supporting Waters’ (2007) conclusion that the software allows the text to become more accessible to the learner. Strategies for language learning subsystems, specifically vocabulary

and grammar, were also examined. The researchers concluded that “vocabulary learning strategies [are] the most productive research area in TELL” (p. 478).

Proctor et al. (2007) conducted a study of 30 fourth-grade students, of which 16 were Spanish-speaking ELs, in a southern California school district to determine if the digital Universal Literacy Environment (ULE) program had an impact on vocabulary and comprehension skills. The researchers utilized repeated measures analysis of variance of general vocabulary knowledge, general reading comprehension, and the digital feature usage of the program. A significant difference was shown in vocabulary development of the ELs tied to the digital feature usage of the hyperlinked glossary, particularly among those with lower pre-test vocabulary scores. Another study conducted by Sharifi et al. (2015) examined the impact of Rosetta Stone software on 60 randomly selected Iranian elementary EFL students’ vocabulary learning. Pre- and post-tests were employed, and the data were examined through independent t-tests. The results indicated the treatment of Rosetta Stone “proved to have a significant impact on vocabulary learning of the learners” (p. 260).

While technological advances can be seen as a positive for instruction, there are still issues that complicate how CALL is implemented within the classroom, thereby hindering instruction. Ward (2015) pointed out that CALL does not meet the needs of all languages, specifically languages that are not predominant in society. The issue of how comfortable and knowledgeable the teacher is with the implementation of CALL in their classroom is also a prevalent concern. With this in mind, Habbash (2020) conducted a mixed-methods study of 35 conveniently sampled teachers in a Saudi Arabia University to determine how well teachers integrated CALL applications in their classroom teaching methodology. Responses to a questionnaire, the main data collection method, were analyzed with z -statistic and

showed that the lack of teacher training on how to implement CALL was the predominant factor that hindered CALL being implemented. Habbash (2020) called for more teacher training on how to implement CALL effectively in the classroom and more professional development.

Current Shifts in CALL

Despite complications in its implementation, technology continues to expand, providing students experiences to enrich their language learning outside of the classroom and the traditional school day. The development of social networks and mobile applications have enhanced the way students can access language learning. Sylvén and Sundqvist (2017) equated this concept to “L2 outside the walls,” which has put the learning solely in the hands of the student, rather than in the control of the teacher (p. ii). Sharifi et al. (2015) also concluded that CALL can allow learners access to the learning environment regardless of place or time. Liu et al. (2015) used the socio-constructivist theoretical framework with six ESL teachers and six ESL students from a university in the southwestern portion of the United States, all of whom were at the intermediate to advanced levels of English proficiency, to explore four different social networking sites to determine if they could help facilitate language learning. Conducting an analysis of the usability features, the four sites were compared based on eight social network features: (a) creating a profile, (b) searching for friends, (c) adding friends, (d) creating a circle of friends, (e) communicating with others in a network via multiple means, (f) receiving feedback from friends in a network, uploading user-generated content, (g) enhancing peripheral awareness, and (h) usability testing from the participants. It was determined that the four sites had the potential to facilitate language learning.

Mobile learning applications have brought CALL research to the present, creating “interactive multimodal...just-in-time, socially-connected, customized language learning” (Lotherington, 2018, p. 122). The terminology for mobile learning applications is Mobile(-assisted) Language Learning (MALL). Two top-rated MALL apps are Babbel and Duolingo. Vesselinov and Grego (2016) were interested in the benefits of Babbel and implemented an efficacy study with a random sample of 325 participants of at least 18 years of age, learning Spanish in Berlin and New York over a two-month period. Although the study was conducted by two independent researchers, it was funded by Babbel. WebCAPE tests results were analyzed, and both pre- and post-usage of Babbel showed that 92% of the participants improved their language proficiency. Lubrano et al. (2019) produced Babbel’s white paper based on a mixed-methods study of 117 English-speaking participants wanting to learn Spanish, to determine the efficacy of Babbel in developing oral language proficiency. Pre- and post-surveys, self-assessments, the ACTFL Oral Proficiency Interview-Computer test, and an exit survey were analyzed. It was determined that modest gains in oral language proficiency could be seen utilizing Babbel.

Similar studies have been directed by Duolingo. Vesselinov and Grego (2012), independent researchers, identified 88 randomly sampled U.S. English-speaking participants at least 18 years old, utilizing the software to learn Spanish, to determine the effectiveness of the software application. Utilizing the Web Based Computer Adaptive Placement Exam (WebCAPE) as the main instrument, Duolingo was determined effective through the overall improvement in language abilities of 91.4 points. There was high reported user satisfaction as well. The difference in the Vesselinov and Grego (2012) study and a Duolingo-sponsored study carried out by Bahjet Essa Ahmed (2016) four years later, was the assessment of two

languages. Bahjet Essa Ahmed (2016) performed a mixed-methods case study of one twelve-year-old native Arabic speaking male student in Saudi Arabia using Duolingo to learn Spanish and English simultaneously. Testing in both English and Spanish was conducted as well as observations and interviews of the student. The results determined that Duolingo can promote the learning of two languages simultaneously, yet with limitations due to its reliance on the direct-translation method.

There has been research pointing to the effectiveness of MALL, yet some research points to flaws in MALL pedagogy and design. Lotherington (2018) examined the pedagogy of the top four MALL apps—Babbel, Busuu, Duolingo, and Memrise. The researcher found that “the pedagogies in all four apps relied heavily on drills and vocabulary memorization” (p. 126). Ahmed’s (2016) study also suggested that while the translation method of language learning had been rejected, the software of Duolingo spawned a return of that method in its design. Krashen (2014) was also critical of mobile apps as they related to language learning, citing that “Duolingo [is] based on conscious learning, ...there is a great deal of evidence showing that conscious learning does not produce true language competence” (p. 14). Shield (2000) also supported this and declared shortcomings regarding the principles of scaffolding and zone of proximal development within technology education. Shield suggested there was still a need for behaviorist theories of teaching lower-level skills.

Behaviorist theory can also be linked to CALL. Much like today’s education software, Skinner’s teaching machine was developed to reinforce the response to the stimulus (Weegar & Pacis, 2012). Drawing from Saettler’s 1990 work, Mergel (1998) provided ties between behaviorist theory and education technology. Six areas were identified as they related to the impact of behaviorism and education technology: behavioral objectives

movement, teaching machine phase, programmed instruction movement, individualized instructional approaches, computer-assisted learning, and a systems approach to instruction. As technology continues to evolve and advance, the pendulum of CALL has shifted, much like it has for the theories of reading. The rise of mobile applications has placed an emphasis on rote memorization and drill practice of concepts to acquire another language, aligning to the behaviorist model. This is a stark contrast to the theories and methods of language acquisition (Herrera & Murry, 2016; Lavadenz, 2011; Lotherington, 2018; Shield, 2000). Yet, whichever aspect of CALL one subscribes to, CALL has revolutionized the way students learn and acquire another language.

Ward (2015) pointed out that CALL does not meet the needs of all languages, specifically languages that are not predominant in society. CALL, however, continues to advance to meet the needs of language instruction in the classroom. One such program that has been developed to support multiple languages as well as reading instruction is Imagine Learning.

Imagine Learning

Imagine Language & Literacy (IL) is an adaptive learning solution that accelerates reading and language proficiency for students in grades PreK–6. Designed to supplement core literacy instruction, IL provides instruction and practice in all four domains of literacy: reading, writing, listening, and speaking. Research has shown that IL has a positive effect on literacy development for ELs in grades K-5 (Cassady et al., 2017; Elliot, 2014; Hobbs, 2016, 2017). Carter (2019) posited that IL “sees students’ cultural and linguistic diversity from an assets-based perspective...the [program sees] students’ native language as help, rather than a hindrance” (p. 3).

Cassady et al. (2017) conducted the first empirical test of the efficacy of Imagine Learning for ELs through a randomized control trial design in five Arizona school districts during the 2014–2015 school year focusing on 1,490 Kindergarten and first grade ELs. A total of 28 schools were part of the study; 14 served as the control, while 14 received the treatment; 813 ELs were in the treatment group, and 677 were in the control group. The Scantron Performance Series Reading Foundation test in English was administered three times over the course of the school year, and a split-plot analysis of variance was employed to analyze the data. The results demonstrated a small but statistically significant benefit of those ELs who utilized IL.

Research Making Change (RMC) (2020) directed a combination case study and correlational design to examine implementation of IL and its impact on grades Kindergarten–second grade student achievement in two districts in the southeastern United States. Schools in each district were randomly selected, with a total sample of 1,375 students, of which 32% were classified as ELs. Both qualitative (classroom observations, teacher focus groups, and school administrator interviews) and quantitative (DIBELS Next benchmark assessment, student, school, and district demographics, and Imagine Learning dosage) were collected. The analysis of the data included coding for common themes and linear regression analysis. Key findings included that fewer than 60% of the students utilized the program for the recommended minutes for participation in the program, and the extent to which students participated in the program impacted their performance on the DIBELS Next assessment in Kindergarten and first grade, but was not statistically significant for those in second grade.

Older students were examined by Elliot (2018), who conducted a quasi-experimental study on the effectiveness of IL on fourth and fifth graders' reading achievement in three

Texas school districts during the 2017–2018 school year. Propensity score matching was employed to create the treatment and control groups of 1,282 fourth graders and 1,064 fifth graders. ANCOVA was used in the analysis of the STARR Reading scores from 2017 and 2018, the Texas state reading assessment, which determined that those students in the treatment group showed significant more growth in their reading scores. Similarly, Heller and Carter (n.d.) conducted a quasi-experimental study to examine the extent of reading achievement gains between those K-5 students who utilized IL as opposed to those who did not in an elementary school in the Midwest where 79% were ELs. The treatment group was comprised of 279 students, while the control group consisted of 262 students. Utilizing regression discontinuity with the Scantron Reading Foundations (K-2) and Reading 2012 scaled score reports, “English language learners in second through fifth grade who used Imagine Learning for more than 20 hours demonstrated higher growth than students who did not use Imagine Learning” (p. 11).

While the impact of IL on reading achievement has been shown through the studies mentioned, IL has also been found to impact language proficiency in ELs as well. Particularly, “to improve language and literacy achievement, Imagine Learning features instruction in phonemic awareness, phonics, vocabulary, fluency, comprehension, grammar, and language development (both academic and conversational)” (Imagine Learning Research Department, n.d.a., n.d.b.). The research organization provided information on increased English language proficiency in California and Washington states as a result of utilizing the software. Imagine Learning Inc. (2019) also examined the impact of the software program on the English Language Proficiency Assessment for California (ELPAC) on 8,000 ELs in six California school districts after using IL during the 2018–2019 school year. The scores for

the 2017–2018 ELPAC were used as the baseline assessment. The school districts implemented IL during the 2018–2019 school year. Multiple linear regression was used to analyze the performance on the 2018–2019 ELPAC scores. The statistically significant results showed that ELs who utilized the program achieved greater scale scores and subdomain performance than those who did not utilize IL.

As mentioned, the landscape of education continues to evolve, and technology has proven to enhance the nature of instruction as well as learning. As education has moved into the 21st century, technology has become a necessary facet of teaching and learning. CALL is utilized as a tool to intervene and close the opportunity gap between ELs and their English-speaking peers. Moreover, Imagine Learning Language and Literacy (IL) has the capacity to support native language in the development of English language acquisition.

Conclusion

It is evident that the historical events outlined have created the context that for immigrants in our country to gain social and economic capital, it has become necessary to learn English as soon as possible. The changes to ESEA have been fueled by political forces, making it difficult for ELs to have the educational experience necessary to perform at the same level as their English-speaking peers. This decreases the likelihood of achieving reading proficiency by the end of third grade. Districts, therefore, have been forced to investigate ways to speed up ELs' ability to learn English so they can perform at the same level as their English-speaking peers on reading assessments. One way districts have explored is the use of intervention programs. Title III funds can only be spent on supplemental programs to increase English proficiency; districts, therefore, are using these funds for intervention programs.

The purpose of this quasi-experimental study was to determine if the software intervention program of IL resulted in higher levels of English language proficiency and reading achievement for third grade ELs who utilized the program compared to third grade ELs who did not use the program. The three theories of deficit, LatCrit, and behaviorist reading created the foundation for the topics that were presented in this literature review: second language acquisition and programs, the historical landscape of language in the United States, and Computer Assisted Language Learning (CALL), which all work to increase learning opportunities for ELs. The next chapter outlines the methodology of the study, including an overview of the research site and the participants in the study, data collection, procedures used to analyze the data, and ethical considerations pertaining to the study.

CHAPTER 4

METHODOLOGY

Current data show that a majority of young ELs are not reading on grade level by the end of third grade. There is an opportunity gap between ELs and their English-speaking peers. Research shows that students reading on grade level by third grade have a higher graduation rate, which in turn leads to future success through employment rates (Department of Education, 2019; Fiester, 2013). The purpose of this quasi-experimental study was to determine if the software intervention program, Imagine Learning Language and Literacy (IL), implemented in a Midwestern urban school district resulted in higher levels of English language proficiency and reading achievement in third grade ELs. English language proficiency is determined by the state English language proficiency assessment; reading achievement is defined as demonstrating grade level reading proficiency as outlined by the state assessment program.

The chapter provides an overview of the research site and the participants in the study, data collection, procedures used to analyze the data, and ethical considerations pertaining to the study.

Research Site and Participants

Participants in this study were third grade EL students in a Midwestern urban school district during the 2018–2019 school year. According to a report by Greenbush (2020), key data on the county and district for the 2018/2019 school year indicate:

- Median family income for the district is \$47,785
- Education attainment less than ninth grade is 12%
- Chronic absenteeism rate is 29%

The report disaggregates data by free and reduced lunch status, ethnicity, and students with disabilities, but does not mention students who are classified as ELs, or the number of languages spoken in the school district or the county.

The school district is a large urban district with an enrollment of 22,000 students, of which 78% are considered economically disadvantaged. There were a total of 1,759 third grade students; 1,215 were classified as ELs during the year of the study. The school district serves a wide array of students whose language is other than English; the total EL population for the district was 8,880 during the school year of the study. There are 65 to 72 different languages spoken in the district. Most students whose first language is other than English are those who speak Spanish, which comprised 43% of the population. Other languages spoken are Burmese, Swahili, Karen, Hmong, Nepali, and Somali.

During the late 1980s and early 1990s, the school district experienced an increase in students who spoke a language other than English; as a result, the district adopted and implemented an ESL program. From that point forward, the only program that has been utilized in the school district has been an ESL program. During the 2018–2019 school year, the district utilized a push-in model of instruction for the elementary ESL program; students remained in their classrooms while an ESL teacher or ESL instructional aide pushed into the regular classroom setting to provide ESL services. Besides utilizing an ESL program, the school district's model for reading instruction followed a balanced literacy approach with guided reading as the method. The school district named their literacy framework the Big 3+, which consisted of interactive read aloud, guided reading, monitored independent reading, and writer's workshop.

Per federal guidelines, all students new to the school district receive a home language survey. When a language other than English is indicated on the home language survey, the district is required to administer a language screener, the KELPA-P. The screener must be given within two weeks of student enrollment. Once the screener is completed, parents are notified by letter as to whether their child is eligible for ESL services. A parent has the right to waive services, and this is done through a meeting; the student is still an identified EL, but they will not receive ESL services through the school. The English as a Second Language department for the school district assigns a language level based on the screener to the student, which will be in place until they take the state English language assessment, the KELPA.

Assessment data for the district reveals an opportunity gap between ELs and their English-speaking peers. As stated in chapter one, in 2018 the total number of students performing at proficiency on the reading assessment was 14.3%; the total number of ELs scoring at proficiency was at 6.2% (Rand, 2019). The same results report showed the total number of third grade students in the school district performing at proficiency was 13.9%, while third grade ELs scoring at proficiency was only 10.6% (Rand, 2019).

As a result of the opportunity gap, during the 2017–2018 school year, the ESL department for the district worked with a local university to secure a grant for additional support for the district’s EL population. One provision of the grant provided Imagine Learning to seven elementary schools in one geographical section of the district that were deemed high-needs, as they had experienced recent growth in their EL population. These schools had total school enrollments ranging from 184 students to 556, as well as total EL enrollment ranging from 17 to 87 students. One elementary school in the grant had 8% of its

population classified as ELs in the 2012–2013 school year; it soared to 39% EL in the 2017–2018 school year. Another school participating in the grant had 11% of its population classified as EL in the 2012–2013 school year and jumped to 32% EL in the 2017–2018 school year. The seven elementary schools comprised similar demographics of the district as a whole in regard to languages spoken, yet some had more concentrated populations of Burmese, Karen, and Swahili speaking students. Therefore, assignment to the experimental group was only due to the school that the students happened to be enrolled in, which was part of the grant; while those students in the control group were in other elementary schools that were not participating in the grant. Students who were dually identified as EL and students receiving special education services were excluded from the study.

Data Considerations

The accessible population consisted of all students enrolled in the third grade in the school district. All EL students in this grade level were part of the research study; the sample size was 962, which was divided into those ELs who received the intervention (the experiment group) and those ELs who did not receive the intervention (the control group).

Design

This quantitative study was quasi-experimental in design since there was not random assignment of participants in the control and experimental groups.

Data Collection

The data was collected during the 2021–2022 school year for the year of the study, the 2018–2019 school year. The data were collected by working with a representative from the district’s research and assessment department. The district representative provided information on the usage of IL, students’ English language proficiency levels according to

the state language assessment, and the data from the 2019 state reading assessment. The data were provided in an Excel spreadsheet and were deidentified to protect the interest of the students.

Measures

In this study, the researcher collected a wide array of data on the participants, such as gender, socio-economic status, and home language, as well as academic assessment scores for the state English language proficiency assessment (KELPA) and the state assessment program (KAP). Data on usage of the software intervention of IL was collected as well for those participants who were part of the treatment group.

Kansas English Language Proficiency Assessment (KELPA)

KELPA is the state language proficiency assessment. All identified EL students in the state take the KELPA each year beginning in Kindergarten. The assessment tests the four domains of literacy, which are reading, writing, listening, and speaking. The assessment is online; Kindergarten and first grade students take a portion of their writing assessment online, as well as a paper-pencil version. Portions of the writing and speaking sections are educator scored. A performance level score, based on a cut score, is given in each domain: (1) beginning, (2) early intermediate, (3) intermediate, (4) early advanced, (5) advanced. Performance level scores are then converted to a proficiency level. Level 1 is not proficient, the student does not yet have the ability to produce grade-level academic content in the English language; Level 2 is nearly proficient, the student is approaching the ability to produce grade-level academic content; and Level 3 is proficient, the student can produce academic content in the English language. Any student who scores proficient on the KELPA is considered proficient and is exited from services. These students are monitored by the

school district for two years after exit, and if they are struggling, they can be re-screened to determine whether services should be reinstated with parent permission.

Peyton et al. (2009) provided information as to the validity and reliability of the assessment in the KELPA Technical Manual, specifically examining the criterion validity between KELPA and KAP:

The third method of evaluating the criterion validity of the KELPA scores was to correlate the KELPA domain and total composite scores with Reading scores from the Kansas General Assessments [KAP]...all correlations are moderate to strong in strength and magnitude and are stable across years of administration. (p. 130)

Kansas Assessment Program (KAP)

KAP is the Kansas Assessment Program, which is taken annually by all Kansas students in grades 3–8. KAP is a computer-based assessment and is machine scored. Cut scores have been established, and students are classified through four levels: Levels 1 and 2 deem that a student is below grade level; and Levels 3 and 4 deem that a student is on grade level or approaching college benchmarks. The University of Kansas Assessment and Achievement Institute (2017) has examined the reliability and validity of KAP:

Because of the intended uses of the test scores are one source of evidence in a validity study, the purposes of the test should be identified before providing evidence to support test validity...evidence gathered on content validity, alignment, cognitive processes, and internal structure supports the use of the KAP assessment to measure the KCCRS content as defined in the test blueprints. Information on test reliability, fairness, and accessibility, and scoring and scaling justify the use of the KAP test scores (p. 31)

Imagine Learning Language and Literacy (IL)

Imagine Learning Language and Literacy, IL, is the software intervention program utilized in this study. IL is an adaptive learning solution that accelerates reading and language proficiency for students in grades PreK–6 (Imagine Learning, n.d.a., n.d.b.).

Designed to supplement core literacy instruction, IL provides instruction and practice in all four domains of literacy—reading, writing, listening, and speaking. IL provides students with direct individualized instruction in the five domains that are considered key for the development of high-level reading ability including (a) phonological awareness, (b) phonics, (c) fluency, (d) vocabulary, and (e) comprehension (Cassady et al., 2017; Research Making Change, 2020). IL also posits that it allows students to become fluent in English and their native language because the program provides native language audio support in 15 languages (Carter, 2019).

Imagine Learning recommends that students in Kindergarten use the program for at least 45 minutes a week, and students in grades 2–6 utilize the program for 60 minutes per week (Research Making Change, 2020). Research has shown that IL has a positive effect for literacy development for ELs in grades K–5 (Cassady et al., 2017; Elliot, 2014; Hobbs, 2016, 2017). Validity and reliability on IL have been studied through the benchmark assessment system within the program. Students take an initial benchmark assessment to place them in the program, followed by a mid- and a final assessment. Research Making Change (2018) conducted a study of over 5,000 K-6 students in Arizona, California, Delaware, Georgia, Illinois, Louisiana, Ohio, and Wyoming to determine the validity and reliability of IL. Students completed the benchmark assessment in IL and the Measures of Academic Progress (MAP) Reading Assessment between January and March of 2017, and between April and June of the same year. Utilizing the Rasch model-based approach, the reliability of the benchmark assessment was high, while bivariate correlations determined moderate to high validity of the benchmark assessment and MAP assessments.

Analysis

The research questions proposed in this quasi-experimental study were:

1. How effective is the adaptive software intervention program IL in improving third grade ELs' English Language Proficiency levels?
2. How effective is the adaptive software intervention program IL in improving third grade ELs' reading proficiency levels?

It is important for ELs to be reading on grade level by the time they end third grade to graduate on time and experience future success. Intervention programs are utilized to increase the probability that ELs experience reading achievement at the same level as their English-speaking peers.

There were two null and two alternative hypotheses for the first research question. The first null hypothesis (H_{01}) was that using the adaptive software intervention program IL has no effect on third grade English learners' ELP levels as determined by the difference between each EL's pretest and posttest KELPA scores (within-subjects factor). The second null hypothesis (H_{02}) was that using the adaptive software intervention program IL has no effect on third grade English learners' ELP levels as determined by the difference between the experimental and control groups' pretest and posttest KELPA scores (between-subjects factor).

The first alternative hypothesis (H_{a1}) was that using the adaptive software intervention program IL has a significant effect on third grade English learners' ELP levels as determined by the difference between each EL's pretest and posttest KELPA scores (within-subjects factor). The second alternative hypothesis (H_{a2}) was that using the adaptive software intervention program IL has a significant effect on third grade English learners'

ELP levels as determined by the difference between the experimental and control groups' pretest and posttest KELPA scores (between-subjects factor).

The null hypothesis for research question two, H_{03} states: Using the adaptive software intervention program IL has no effect on third grade English learners' reading proficiency as determined by the difference between the experimental and control groups' Kansas Reading Assessment scores.

The alternative hypothesis for research question two, H_{a3} states: Using the adaptive software intervention program IL has a significant effect on third grade English learners' reading proficiency as determined by the difference between the experimental and control groups' Kansas Reading Assessment scores.

The independent variable that was examined was the intervention; specifically, whether a third grade EL has utilized the adaptive computer software intervention program of IL or not. This variable's level of measurement was nominal, in that students either received the intervention or not. There was a mediating variable, which was the amount of time spent on the intervention. The dependent variables for the study were the level of English language proficiency as determined by the state English language proficiency assessment; and reading proficiency as determined by the state assessment for reading. These variables were an interval level of measurement, in that the student received a raw score. The dependent variables were also an ordinal level of measurement; the raw scores were converted to levels of performance. On the English language proficiency assessments, the raw scores are placed in one of three levels: Level 3 deems a student to be proficient in the English language. The raw cut scores for the state reading assessment are placed in one of four levels; Level 3 deems a student to be reading at grade level proficiency.

Participants' first grade KELPA scores were used to perform a t-test to demonstrate that the control and experimental groups are comparable in regard to their initial English Language Proficiency levels. In order to address the first research question, whether or not the intervention had an effect on third grade ELs English language proficiency, KELPA scores from first grade were used as a pre-test, and the third grade KELPA scores were used as the post-test. Split plot ANOVA were employed to examine the differences between and within the groups.

To address the second research question, whether or not the intervention had an effect on third grade ELs' reading proficiency, a t-test was utilized to compare the control and the experimental group students' performance on the 2019 Kansas Reading Assessment. IBM Statistical Package for the Social Sciences (SPSS) was used in the analysis.

Ethical Considerations

The research study was conducted in a common educational setting with normal educational practices. Because the researcher is employed by the district, it was important to ensure that ethics were considered in performing this study. There was no contact between the researcher and the students; only reported assessment data was examined. To ensure adherence to ethical considerations, the data collected on the participants in the study were deidentified, and the researcher worked with the district technology services department to encrypt the data for storage, all to minimize the risk of breach of a confidentiality. The deidentification of the data also allowed for privacy through the Family Educational Rights and Privacy Act (FERPA) by minimizing the possibility of matching or tracing any achievement data to individual students.

Conclusion

Reading on grade level by the end of third grade is the hallmark of future success, and there is an opportunity gap between ELs and their English speaking peers. In conclusion, the purpose of this quasi-experimental study was to determine if a software intervention program, IL (Imagine Learning), implemented in a Midwestern urban public school district resulted in higher levels of English language proficiency and reading achievement in third grade ELs.

CHAPTER 5

RESULTS OF ANALYSES

Current data shows that a majority of young ELs are not reading on grade level by the end of third grade. There is an opportunity gap between ELs and their English-speaking peers. Research shows that students reading on grade level by third grade have a higher graduation rate which in turn leads to future success through employment rates (Department of Education, 2019; Fiester, 2013). The purpose of this quasi-experimental study was to determine if the software intervention program of Imagine Learning Language and Literacy (IL), implemented in a Midwestern urban school district resulted in higher levels of English language proficiency, as well as reading achievement in third grade ELs. English language proficiency is determined by the state English language proficiency assessment; while reading achievement is defined as demonstrating grade level reading proficiency as outlined by the state assessment program. This chapter presents further information pertaining to the experimental and control groups, the statistical analyses with data tables, hypotheses testing, conclusions, and summary of the results.

Characteristics of Experimental and Control Groups

As previously discussed, third grade students who were classified as ELs were considered as part of the sample for this study; the original sample size was 962. Once the data were compiled by the district representative, the data set was cleaned to ensure proper analysis. First, students who did not have KELPA scores during the 2016–2017 school year were removed, as this score was used as the pre-test; then those who did not have a KELPA score in 2018–2019, the score for the post-test, were removed. Next, students who did not have KAP scores during the 2018–2019 school year were also removed.

Imagine Learning (IL) data were then examined; it was determined that only 17 ELs in the sample did not utilize IL during the 2017–2018 school year, while 422 did not utilize IL during the 2018–2019 school year. As a result, to ensure validity with the data analysis, the experimental group became those ELs who utilized IL during both the 2017–2018 and 2018–2019 school year, while the control group were those ELs who used IL during either school year or did not utilize IL at all. Finally, 70 students who were dually identified (i.e., identified as IL as well as receiving special education services) were removed from the sample. The total convenience sample consisted of 620 ELs, the experiment group consisted of 233 students, and the control group consisted of 387.

Statistical Analyses and Data Tables

The statistical analyses were run utilizing the IBM SPSS package. In order to address the first research question, students' KELPA raw reading scores were used in the analysis. KELPA reading scores from 2016–2017 were analyzed first utilizing an independent sample t-test, which is used to compare the mean scores on a variable for two different groups (Gravetter et al., 2018; Healey, 2016). To be considered proficient in the reading domain of KELPA, students' scores must be at the threshold of a raw score of 584 in the first grade. The independent t-test conducted for the 2016–2017 KELPA reading scores for the experiment and control groups resulted in a significant difference between the scores for the Experiment ($M = 519.15$, $SD = 93.26$) and Control ($M = 544.74$, $SD = 88.13$; $t(618) = -3.43$, $p < .001$, two-tailed). The magnitude of the differences in the means (mean difference = -25.59 , 95% CI $[-40.26, -10.92]$) was very small (eta squared = $.02$). Table 1 displays the results of this analysis.

Table 1

Differences in KELPA 2016–2017 Scores

	Experiment			Control			Mean Difference	95% CI	df	t	p	Partial eta squared
	n	M	SD	n	M	SD						
KELPA 2016–2017	233	519.15	93.26	387	544.74	88.13	-25.59	-40.26, -10.92	618	-3.64	< .001	.02

Split-plot ANOVA statistical analysis was utilized to examine the differences within and between the treatment and control groups on their English proficiency as demonstrated by KELPA. Students' pre-test scores on KELPA were compared to their post-test scores on KELPA. There was no significant interaction between KELPA and group assignment, Wilks' Lambda = .99, $F(1, 618) = 4.39$, $p = .04$, partial eta squared = .01. There was a substantial main effect for KELPA, Wilks' Lambda = .89, $F(1, 618) = 73.54$, $p < .001$, partial eta squared = .11. The main effect comparing the two groups was not significant, $F(1, 618) = 11.85$, $p = .001$, partial eta squared = .02, suggesting no difference between the groups in the effectiveness of the intervention. The results are displayed in Table 2.

Table 2

Differences within and between KELPA Scores across Time Periods

	KELPA 2016–2017			KELPA 2018–2019		
	n	M	SD	n	M	SD
Experiment	233	519.15	93.26	233	555.98	60.14
Control	387	544.74	88.13	387	567.11	60.28

To address the second research question, another independent t-test was utilized to compare the means of KELPA 2018–2019 reading scores to the KAP 2018–2019 reading scores. To be considered proficient in the reading domain of KELPA, students' scores must be at the threshold of a raw score of 610 in the third grade, while a raw score of 300 meets the threshold of proficiency for KAP. The independent t-test conducted for the 2018–2019

KELPA reading scores for the experiment and control groups also resulted in a significant difference between the scores for the Experiment ($M = 555.98$, $SD = 60.14$) and Control ($M = 567.11$, $SD = 60.28$; $t(618) = -2.23$, $p = .03$, two-tailed). The magnitude of the differences in the means (mean difference = -11.13 , 95% CI $[-20.94, -1.32]$) was very small (eta squared = $.01$). The 2018–2019 KAP reading scores, however, for the experiment and control groups showed no significant difference between the scores for the Experiment ($M = 272.71$, $SD = 28.57$) and Control ($M = 275.27$, $SD = 22.39$; $t(618) = -1.24$, $p = .22$, two-tailed). The magnitude of the differences in the means (mean difference = -2.56 , 95% CI $[-6.61, 1.49]$) was very small (eta squared = $.002$). Table 3 shows the results of this analysis.

Table 3

Differences in 2018–2019 KELPA and KAP Scores

	Experiment			Control			Mean Difference	95% CI	df	t	p	Partial eta squared
	n	M	SD	n	M	SD						
KELPA 2018–2019	233	555.98	60.14	387	567.11	60.28	-11.13	-20.94, -1.32	618	-2.23	.03	.01
KAP 2018–2019	233	272.71	28.57	387	275.27	22.39	-2.56	-6.61, 1.49	618	-1.24	.22	.002

Hypotheses Testing

There were two research questions guiding the study, each with corresponding hypotheses. The first question asked was: How effective is the adaptive software intervention program IL in improving third grade ELs' English Language Proficiency levels?

There are two null and two alternative hypotheses for the first research question. The first null hypothesis (H_{01}) is that using the adaptive software intervention program IL has no effect on third grade English learners' ELP levels as determined by the difference between each EL's pretest and posttest KELPA scores (within-subjects factor). The second null hypothesis (H_{02}) is that using the adaptive software intervention program IL has no effect on third grade English learners' ELP levels as determined by the difference between the experimental and control groups' pre-test and post-test KELPA scores (between-subjects factor).

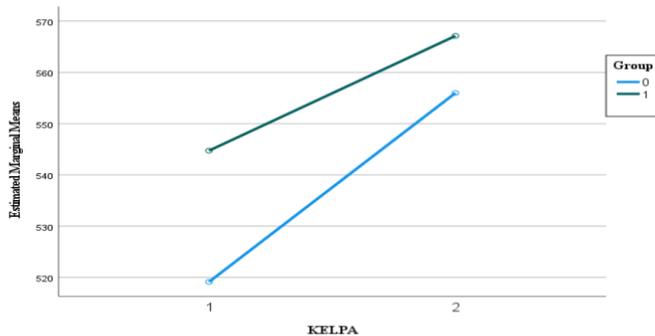
The first alternative hypothesis (H_{a1}) is that using the adaptive software intervention program IL has a significant effect on third grade English learners' ELP levels as determined by the difference between each EL's pretest and posttest KELPA scores (within-subjects factor). The second alternative hypothesis (H_{a2}) is that using the adaptive software intervention program IL has a significant effect on third grade English learners' ELP levels as determined by the difference between the experimental and control groups' pretest and posttest KELPA scores (between-subjects factor).

As a result of the statistical analysis conducted, we reject the first null hypothesis (H_{01}), which means that there was a statistically significant difference between each EL's pre- and post-test KELPA scores (within-subjects factor). The second null hypothesis (H_{02}) is also rejected because there was a statistically significant difference between the experimental and

control groups' pre- and post-test KELPA scores (between subjects factor). However, this difference is not in the expected direction. The control group scored higher than the experimental group on KELPA. However, when we compare the groups' mean scores for pre- and post-tests (the control groups' scores improved from 544.74 to 567.11, while the experimental groups' scores improved from 519.15 to 555.98), we can observe the difference in terms of the growth of the experimental group. The results show that the opportunity gap between the control and experimental groups had significantly decreased. Figure 1 depicts this analysis.

Figure 1

Estimated Marginal Means of KELPA



The second research question asked: How effective is the adaptive software intervention program IL in improving third grade ELs' reading proficiency levels?

The null hypothesis for research question two, H_{03} , states: Using the adaptive software intervention program IL has no effect on third grade English learners' reading proficiency as determined by the difference between the experimental and control groups' Kansas Reading Assessment scores.

The alternative hypothesis for research question two, H_{a3} , states: Using the adaptive software intervention program IL has a significant effect on third grade English learners' reading proficiency as determined by the difference between the experimental and control groups' Kansas Reading Assessment scores.

As a result of the statistical analysis conducted, we accept the null hypothesis H_{03} , which means that the groups' KAP scores were not significantly different.

Conclusions and Summary

In conclusion, the result of analysis shows that Imagine Learning (IL) had a significant impact on ELs' English proficiency as determined by performance on their first and third grade KELPA reading scores; yet there was not a significant impact between the experimental and control groups. Furthermore, analysis determined that utilizing Imagine Learning had no impact on ELs' third grade KAP reading scores. In Chapter 6, the results are discussed, as well as the implications for leadership, limitations, and recommendations for future research.

CHAPTER 6

DISCUSSION

The purpose of this quasi-experimental study was to determine if the software intervention program, Imagine Learning Language and Literacy (IL), implemented in a Midwestern school district, resulted in higher levels of reading achievement in third grade ELs. The results presented in Chapter 5 are examined in this chapter.

Discussion of Findings

The results of the analysis determined that IL presented a significant impact on third grade ELs' performance on KELPA from first to third grade; yet there was no difference between the experiment and control group. The results also indicated that IL did not have a significant impact on third grade ELs' reading proficiency. There are several factors that can explain the findings.

First, the type of language program can have an impact on the development of English. Research has shown the dual language programs are the most effective, while English only programs are not as effective (Herrera & Murry, 2016). Carter and Hopkins (2020) also supported the notion that the development of the primary language facilitates the development of the new language. The Midwestern urban public school district in this study, however, utilized an English only program model. The school district's decision about which program model to implement is guided by financial constraints; however, it can also be seen, as LatCrit scholars have indicated, as a deep seated system of racism regarding immigration. Recalling Solorzano and Yosso's (2001a) connection between LatCrit and education as:

A framework that can be used to theorize and examine the ways in which race and racism explicitly and implicitly impact on the educational structures, processes, and discourses that affect People of Color generally and Latinas/os specifically. Using the

experiences of Latinas/os, a LatCrit theory in education also theorizes and examines that place where racism intersects with other forms of subordination... is conceived as a social justice project that attempts to link theory with practice, scholarship with teaching, and the academy with the community. [It] is transdisciplinary and draws on many other schools of progressive scholarship. (p. 479)

This program model, English only, can also be confounded with teacher perceptions. Through examination of the data prior to the analysis, there was a discrepancy between those ELs who utilized IL and those who did not. It would be natural to examine how the teacher implemented the intervention as another factor regarding the findings.

Imagine Learning recommends students use the program with fidelity, approximately 45 to 60 minutes per week in a school year (Imagine Learning, 2019). Yet when the data were being cleaned prior to analysis, student usage demonstrated that this was not the case. Were teachers properly trained on implementation of the program? Habbash's (2020) study examined how teachers integrated CALL applications in their classroom teaching methodology; it verified the lack of teacher training on how to implement CALL hindered the implementation and ultimately its effectiveness. Perhaps another reason could be seen as a result of teachers misunderstanding the difference between BICS and CALP. Cummins (1992) noted the distinctions between BICS and CALP; ELs tend to pick up basic social language, BICS, between one to three years, while it can take anywhere from five to seven years to become fully academically literate, CALP, in English. Shapiro (2014), however, would point to another cause, which would be the differences in languages being seen as an obstacle to learning instead of an asset; Shapiro went further, stating "this ideology is reflected in educational practices that tend to reify White, monolingual, US-born students as the norm and present ELL students as the 'other'" (p. 387). The deficit perspective that teachers hold of their students' abilities can lead to students internalizing the deficit in their

own performance, which Steele (1997) defined as a stereotype threat. Shapiro (2014), as previously discussed, conducted a study examining the impact of deficit thinking on ELs' perceptions, where the students themselves were able to articulate how deficit perspectives, through stereotype threat, created educational situations they could not avoid. The community, as well as the teachers, viewed them as having little or no schooling, and lacking in literacy; which is why they continued to experience a gap in achievement. They were placed in ESL courses, when they knew the general education English classes afforded more opportunity. This factor, the teacher's perception, can be further supported in the cleaning of the data, in which 70 students were removed from the analysis due to having a dual identification (i.e., also receiving special education services), confirming the deficit perception of language learners.

The next factor that may have impacted the findings is the type of reading instruction ELs received. The National Reading Panel (2000) reported five major components of reading: phonemic awareness, phonics, fluency, comprehension, and vocabulary. August and Shanahan (2006) released a report supporting the five components as they relate to reading instruction for ELs. The Midwestern urban public school district in the study, however, utilized a balanced literacy framework for reading instruction. O'Day (2009) noted that this framework was not developed with the needs of ELs in mind, and Velasco (2012) stated that adaptations were necessary to meet the needs of ELs. As previously discussed in Chapter 1, Robinson's (2018) study determined that ELs benefited from an intensive phonics-based approach to reading instead of a whole language approach.

The aforementioned factors must be considered in the interpretation as to whether or not the software intervention program of Imagine Learning had an impact on ELs' English

and reading proficiency. The factors also lay the foundation for recommendations for future research discussed later in this chapter.

Summary and Conclusions

The aim of this quasi-experimental study was to determine if the software intervention program of Imagine Learning Language and Literacy (IL), implemented in a Midwestern urban public school district, resulted in higher levels of English proficiency and reading achievement in third grade ELs. The findings demonstrated that Imagine Learning (IL) had a significant impact on ELs' English proficiency as determined by performance on their first and third grade KELPA reading scores; yet there was not a significant impact between the experimental and control groups. Furthermore, the findings determined that utilizing Imagine Learning had no impact on ELs' third grade KAP reading scores.

There were, however, factors that could explain the findings; therefore, we cannot thoroughly conclude that Imagine Learning (IL) did not truly impact ELs' English and reading proficiency. The factors—type of language program, teacher perception and instruction, and type of reading program—can be countered by a leader who understands the complexity of their requirements.

Implications

Based on the findings of this study, in order to lessen the opportunity gap for ELs it is essential to have a leader who can address their varied needs. A major implication from this research, therefore, is leadership. It was difficult to find enough research explicitly linked to leadership practices and their impact on student achievement for closing the achievement gap for ELs. While there were well over 258 studies that examine leadership practices to close the opportunity gap, when the additional search term English Language Learners was added,

only one study was produced. To determine the success of districts' efforts in closing the opportunity gap for ELs, the mark of accomplishment in this area is to ensure EL students' test scores and dropout rates are comparable with those of other students. Having the right school leader is essential to this mission.

The school leader has been shown to impact student achievement, both directly and indirectly (Braun et al., 2017; Hallinger et al., 1996). Carbaugh and Marzano (2018) posited that school leaders are crucial to the success of schools. The Wallace Foundation (Grissom et al., 2021) found compelling evidence that effective leadership leads to student achievement. Branch et al. (2013) conducted a study utilizing personnel and student achievement data as part of the University of Texas at Dallas Texas Schools Project to determine the effectiveness of a school principal on student achievement. The results “indicate that highly effective principals raise the achievement of a typical student in their schools by between two and seven months of learning in a single year; ineffective principals lower achievement by the same amount” (p. 63). While this research supports the impact the principal has on achievement, other research suggests that the teacher has more influence on achievement; the principal impacts achievement indirectly through their work with teachers (Carbaugh & Marzano, 2018; Johnson et al., 2017). Through their study of 93 elementary schools in rural, high-poverty areas in the northern region of a Midwestern state, Goddard et al. (2015) found a direct effect of leadership on teacher collaboration and suggested that “strong instructional leadership can create structures to facilitate teachers’ work in ways that strengthen organizational belief systems, and, in concert, these factors foster student learning” (p. 501). Leadership matters, yet the right styles of leadership for ELs are key to their academic success. To close the opportunity gap between ELs and their English-speaking peers, leaders

must have a strong instructional framework, knowledge of and appreciation for diverse cultures, as well as a push for equity, justice, and inclusion. Leaders must possess an asset-based stance, rather than a deficit perspective of language; and leaders must, as Solorzano and Bernal (2001) stated, “challenge the predominant deficit frameworks used to explain...educational inequity” (p. 313). Hence, instruction with an added lens of culturally responsive, multicultural leadership, and social justice leadership are explored in this chapter as they relate to the academic success for ELs.

Instructional Leadership

The Professional Standards for Educational Leaders (National Policy Board for Education Administration, 2015) states the importance of instructional leadership. Standard Four states: “effective educational leaders develop and support intellectually rigorous and coherent systems of curriculum, instruction, and assessment to promote *each* student’s academic success and well-being. Instructional leadership evolved out of the effective schools movement of the 1980s” (p. 12). The principal oversees all aspects of instruction within the school setting and is the leading authority on effective instruction (Marks & Printy, 2003). Instructional leaders focus on the curriculum and the way it is delivered to students. These leaders supervise and monitor all aspects of instruction and its impact on student progress and achievement. Instructional leaders must embody the following characteristics or capacities: provide staff development, create a working environment, encourage teachers, evaluate instruction, and be able to understand current literature related to instructional improvement (Haberman et al., 1998). Early definitions of instructional leadership are found, with Hallinger and Murphy (1987) positing three dimensions to instructional leadership: defining the school mission, managing the instructional program,

and promoting the school learning climate. Barth (1986) suggested that instructional leadership was comprised of maintaining high expectations for teachers and students, supervising classroom instruction, coordinating the school's curriculum, and monitoring student progress. Haberman (1999) stated that "to function as the instructional leader, the principal must know and keep current with the most effective methods of instruction" (p. 45). Carbaugh and Marzano (2018) recognized the many different avenues to define instructional leadership, yet no matter the definition, all related to the fact that the principal must have a "deep involvement with teaching and learning" (p. 4). The research on leadership fails to target the impact on marginalized groups, such as ELs. As mentioned, the gap in the literature between leadership to close the achievement gap for ELs perpetuates the notion that marginalized groups, such as ELs, are invisible (Vales, 2005).

Padron and Waxman (2016) surveyed and interviewed 22 elementary principals in the United States' south central region within a metropolitan school district with many ELs to study principal knowledge and perceptions of second language programs. The principals in this school district had the autonomy to determine which instructional program to implement for their ELs. Utilizing a constant comparison method, the results identified two major themes: "the key role of the high-quality teachers in second language programs for [ELs] and the lack of clarity and consistency in programs for [ELs], especially at the school- and district-levels" (p. 135). It was evident through the survey and interviews that the principals had limited knowledge of second language programs, and that "the lack of knowledge about how to properly implement second language programs is of concern since it is important for principals to be instructional leaders in their schools" (p. 127). In order for ELs to be successful, principals must be knowledgeable about the various programs and observe

teachers in the classroom. ELs rely on strong instructional leaders to close the opportunity gap, those who have “deep knowledge of teaching and learning;” as well as those who understand language and how to embed best instructional practices in reading. (Carbaugh & Marzano, 2018, p. 4).

Research presents different models of instructional leadership. Johnson et al. (2017) suggested a coherent educational improvement system to ensure effective instruction. Within their system, leaders ensure that stakeholders feel valued and capable; develop a focus on teaching a set of important, challenging concepts and skills; and develop clarity about how to assess student proficiency in those concepts and skills. The key aspect, according to Johnson et al. (2017), is to ensure the effectiveness of initial instruction. Leaders who work within this system of instructional leadership focus on planning for quality instruction. Bambrick-Santoyo (2018) discussed instructional leadership through four instructional levers: data-driven instruction, instructional planning, observation and feedback, and professional development. Porterfield and Carnes (2014) discussed five leadership models that leaders today need to be successful in this new world: leader as coach, leader as caring listener, leader as truth teller, leader as risk taker, and leader as storyteller. A leader who operates within this new model builds and develops employees as well as community; carefully listens to the needs of all stakeholders; tells the truth, even when the news is bad; and steps out to learn new manners in which to operate (Porterfield & Carnes, 2014). DiPaola and Wagner (2018), however, take the different models of instructional leadership and create a system comprised of supervision, evaluation, and professional development. Whatever the model, there is unmistakable evidence that to be an instructional leader, specifically one who has ELs on their campus, there must be not only knowledge of best instructional practices, but

also collaboration with teachers. Instructional leaders recognize that their efforts working with teachers, whether through planning, observation and feedback, or data conversations, has an impact on student learning (Bambrick-Santoyo, 2018; DiPaola & Wagner, 2018; Johnson et al., 2017; Porterfield & Carnes, 2014).

DiPaola and Wagner's (2018) model that emphasizes supervision, evaluation, and professional development, presents the collaborative approach that a leader has with their teachers to improve instruction. To become an effective supervisor, leaders must have mastered three areas: knowledge, skills, and understanding. The goal of supervision is to "build capacity in teachers by fostering teachers' motivation and lifelong learning skills with the overarching goal of improving instruction and student learning" (DiPaola & Wagner, 2018, p. 103). DiPaola and Wagner (2018) also noted that "the most important work a principal does as a supervisor is working with teachers to facilitate their professional growth and development" (p. 230). Not only do principals need to be knowledgeable and take responsibility for instruction of ELs on their campus; they must also do this work through a network of instructional leadership (Brooks et al., 2010; Tupa & McFadden, 2009).

Utilizing strategic sampling across four districts in Washington state with different EL populations, Elfers and Stritikus (2014) conducted a case study to determine how school and district leadership actions aimed at helping teachers provide instruction that is responsive to ELs in order to bring about instructional change. Through observations, interviews, and documents, five instructional leadership themes were identified that supported classroom teachers' work with ELs: a focus on high quality instruction; a blend of district- and school-level initiatives; communication of a compelling rationale; differentiating support systems based upon level; and use of data to guide instructional improvement. The leaders focused on

district workforce development practices specifically targeting teachers of ELs, made instruction of ELs a top priority, and valued students' language and culture within instruction (Elfers & Stritikus, 2014).

Strong instructional leadership is necessary to close the opportunity gap for ELs. Leaders must possess knowledge of programs, as well as ways in which to support their teachers through observation and feedback, and professional development. Leading with a strong instructional framework, principals must also possess a specialized lens to address the needs of ELs that is culturally responsive and multicultural.

Culturally Responsive and Multicultural Leadership

It seems fitting that if we are dealing with a group of diverse learners, ELs, the instructional leader must understand the culture of their students, value and infuse culture in decisions, and address all issues of diversity on their campus. To these leaders, language and culture are assets to the instruction of ELs. The framework for multicultural leadership has its roots in multicultural education or teaching. Delpit (2006) stated, "when a teacher is familiar with aspects of a child's culture, then the teacher may be better able to assess the child's competence" (p. 228). Nieto (2002) pushed the limits by calling multicultural education antiracist education. Riehl (2000) began to bridge the concept of multicultural education to the practice of leadership, by centering on three tasks that administrators would engage in to demonstrate this: fostering new meanings about diversity; promoting inclusive instructional practices within schools; and building connections between schools and communities.

Through an exploratory case study over the period of one school year, Gardiner and Enomoto (2006) examined the roles of six multicultural leaders in an urban setting, all of whom were white, to examine multicultural leadership. Cross-case analysis was employed on

the data collected through field work, observations, documents, and in-depth interviews. In their findings, the researchers determined the participants were multicultural leaders based on their actions as well as on the settings in which they practiced. These actions supported Riehl's (2000) three tasks. The keys to multicultural leadership addressed diversity, demanding inclusive practices, and embracing issues of equity and justice.

Based on the works of Delpit (2006) and Nieto (2002), culturally responsive leadership became synonymous with multicultural leadership. Culturally responsive school leaders have a moral responsibility to ensure that groups of diverse learners receive a quality education. Multicultural leadership, however, takes it to another level because these leaders would affirm students' cultures, and critically reflect on their own biases (Khalifa et al., 2016). Culturally responsive or multicultural leadership is necessary to meet the needs facing diverse students (Khalifa et al., 2016). Since ELs have been historically marginalized, culturally responsive, or multicultural leaders face this with a moral responsibility and address diversity by promoting inclusive practices and promoting new meanings about diversity (Riehl, 2000).

Instructional leadership with a culturally responsive, multicultural lens, however, is not enough; a leader must also embody the characteristics that promote equity, justice, and inclusion; leaders must recognize the long-standing system of racism that has been embedded in the educational world. Standard Three of the Professional Standards for Educational Leaders (National Policy Board for Education Administration, 2015) calls for equity and cultural responsiveness, specifically stating that effective educational leaders strive for equity of educational opportunity and culturally responsive practices to promote each student's academic success and well-being. ELs need a leader who also calls for social justice.

Social Justice Leadership

Whereas the literature on instructional leadership with a multicultural, culturally responsive lens has not yielded much association to the specific needs of ELs, the research on social justice leadership and its connection to the success of ELs is plentiful. Social justice leadership can be identified with and defined by terms such as equity, advocate, moral purpose, inclusive, and justice (Furman & Gruenewald, 2004; Theoharis, 2007, 2008). The early works of Theoharis (2007, 2008) defined the role of social justice within leadership as a focus on marginalized groups of students, referencing specifically ELs. Furman and Gruenewald (2004) also speak to this style of leadership as one that has a moral purpose to the work. Those who exhibit social justice in their leadership practices ensure that there is equity and inclusion for groups, such as ELs, in their schools.

Theoharis and O'Toole (2011) conducted a collective case study of two urban elementary leaders in the Midwest over a three-year period. They examined ways in which principals created asset-based collaboratives, inclusive learning opportunities and services for ELs. They also studied the varying approaches and leadership necessary for asset-based, collaborative, and inclusive programming for ELs in current practice. Through a brief examination of the types of instructional programs for ELs, effective social justice principals, according to Theoharis and O'Toole (2011), must have an asset-based orientation and a knowledge of the research, which leads to the preferred instructional practice for ELs of inclusion. A constant comparative method approach was utilized in the analysis of observations, interviews, field logs, and documents. The findings suggested that the two principals, who had the necessary components of social justice leadership, had an impact on the academic achievement of ELs at their schools.

Bringing the research on social justice leadership to the present, there is not much change in the underlying premise as to why it exists, which is to promote the need for equity and inclusion for historically marginalized groups. There is more of a focus, however, on how it is practiced, through navigating policy implementation within increased accountability measures. Mavrogordato and White (2020) conducted a case study in a purposefully selected sample of eight Texas elementary schools over the course of one year to investigate the role school leaders play in implementing state policy regarding English Learner reclassification in schools and how social justice is enabled or obstructed through school leaders' reclassification policy implementation. Data for the study included observations of Language Proficiency Assessment Committee (LPAC) meetings, which was responsible for determining reclassification of ELs, and focus group interviews of the members of the LPAC after the meetings were held. There were multi-stages of pattern coding around thought, action, and behavior. The findings presented three channels of influence that leaders had on the reclassification of ELs: they controlled the meeting agendas; they decided what data sources would be used and which ones would not; and they determined how to implement new policy changes and how to respond in cases where there had been errors in implementing these changes. From here the authors proposed "an empirically based framework that school leaders could use to strive to enact social justice through policy implementation" (Mavrogordato & White, 2020, p. 27). Specifically, those who will exhibit social justice through policy implementation have a deep understanding of the policy as well as have a transformative approach to policy implementation; "when taken together, school leaders...are well positioned to enable social justice in the policy implementation process" (p. 31).

Leadership through the lens of social justice is an absolute requirement to close the achievement gap for ELs. Recognizing that ELs are a historically marginalized group, the push for equity and inclusion are essential. DeMatthews and Izquierdo (2017) conducted a year-long case study of one principal in a Texas elementary school with a large EL population near the U.S.-Mexico border to examine how her leadership styles and actions created a more inclusive and socially just school. The principal was selected through purposeful sampling based on a set of criteria, one of which was evidence of academic success. The school had a history under the principal's leadership of closing the achievement gap. Data examined included observations, interviews with the principal, staff, parents, and district leaders, and documents. The findings supported that the beliefs the principal held on leadership and social justice, which were seen through high expectations, inclusive practices, and community engagement, impacted the school culture and achievement.

There are also connections between and within the styles of leadership necessary to close the achievement gap for ELs. Newcomer and Cowin (2018) conducted a case study of a school leader in Arizona with an EL population of 65% to examine the frameworks of culturally responsive and social justice leadership. The researchers combined the work of Khalifa et al.'s (2016) culturally responsive leadership and Theoharis' (2007) social justice leadership to construct the foundation for the literature review. The data in this study was part of a larger ethnographic case study, but the method was slightly different because they used the method of portraiture. Data gathered were field notes, interviews, observations, focus groups, and samples of student work. By examining the principal's journey to becoming a culturally responsive social justice leader, the findings were categorized by the challenges and how he confronted them. The challenges included shifting the language and

culture of the school; engaging parents, families, and the community; strengthening curriculum and instruction; negotiating district, state, and federal policies; and continuing to lead after retirement. The challenges all supported the framework of culturally responsive social justice leadership as a practice necessary for leaders of diverse learners.

The association between leadership styles necessary for the academic success of ELs is also seen with instructional and social justice, as leaders can exhibit the traits of a socially just leader while they are working with instruction. As previously cited, DiPaola and Wagner (2018) stated that the process of supervision works to build teacher capacity. To do this work, leaders must often identify specific learning needs of the teacher. Aguilar (2020) presented six gaps that teachers often possess, and it is the responsibility of the leader to address them through the process of supervision. The gaps consist of skill, knowledge, capacity, will, cultural competence, and emotional intelligence. A socially just leader works with teachers to close these gaps to change instructional practices. The gap of cultural competence is important in that it addresses a teacher's ability to work with cultures and beliefs other than their own; yet, according to Aguilar (2020), it is not addressed properly. Socially just leaders recognize that this gap, if properly addressed, can assist in changing educational inequities (Aguilar, 2020).

In conclusion, the work of a school leader is essential to the success of ELs. Research has shown that the school leader influences achievement (Braun et al., 2017; Carbaugh & Marzano, 2018; Grissom et al., 2021; Hallinger et al., 1996). For ELs, however, a leader must understand and support best instructional practices that create equity, justice, and inclusion for ELs on their campus. Leadership is power; the principal must use this power to promote an asset-based view of language to counter the systematic nature of racism of

educating marginalized groups such as ELs (Flores et al., 1991; Gorski, 2008). The school leader can be one who changes this perspective, one, as previously mentioned by Zhao (2016), who stops defining students through weaknesses and fixing their perceived deficits and starts looking for and supporting strengths. The leader recognizes that the curriculum must be inclusive and focused on promoting practices where language is not seen as a category of race (Ladson-Billings. & Tate, 1995; Monzo & Rueda, 2009). The future success of ELs is incumbent on the success of the leader.

Limitations

As mentioned in Chapter 1, there were limitations to this study. Research notes that several factors influence the attainment of English; family socio-economic status, home literacy, and maternal level of education play a role in a child's development of the English language (Echevarria et al., 2017; Goldenberg et al., 2006). The school district does not gather data on the maternal level of education or home literacy; therefore, these were limitations to the study.

Recommendations for Future Research

The recent pandemic and its impact on education is a cause for future research. How will schools respond to students who were not engaged through virtual learning? How will teachers develop different instructional practices to meet the needs of their students? It is apparent that the learning loss students experienced has only furthered the gap that already existed. It is, as Apple (2008) alluded to, another social movement that will impact curriculum in schools. Ladson-Billings and Brown (2008) additionally suggested the notion of national panics, which is where specific events give rise to societal fear and the responses that follow. Yet, does the pandemic further the sentiment of Zhao, who states, "the gap is

used as a justification for sorting people into different social and economic strata so as to ensure the existing social order continues” (2016, p. 722).

Caruthers and Friend (2016) spoke of the power of student voice in school transformation. Regarding this study, including student voice would also be a consideration for future research by employing a mixed-methods approach to examining the data, as well as student focus groups. This type of study would allow for exploration of the concept of Steele’s (1997) stereotype threat; would the perceived intellectual abilities of students by their teachers map to the students’ own identity of their ability to gain proficiency in English? Yet another area for future research is the role of the teacher in closing the opportunity gap. The findings of the study demonstrated that understanding the perceptions and skills of the teacher in teaching ELs impacts the students’ performance. Examining the amount of time that teachers participate in professional development to implement an intervention would be an additional piece to explore as it relates to the teacher’s role in closing the opportunity gap for ELs.

Based on the findings of this study, an experimental study with pre- and post-test design would be optimal, which would include student voice and role of the teacher. The Midwestern urban public school district, as mentioned, has moved away from the balanced literacy approach to the science of reading with an emphasis on the five core areas of literacy instruction. Assignment of students to the experiment and control group, professional development provided to the teachers, and careful monitoring by the leader, would enhance the study.

Concluding Thoughts

The opportunity gap for ELs will more than likely continue to be an issue that will be studied, and districts will be forced to examine ways by which to close the gap. It is, however, the responsibility of the leader to ensure that students are reading on grade level by the end of third grade. Research shows that students reading on grade level by third grade have a higher graduation rate, which in turn leads to future success through employment rates (Department of Education, 2019; Fiester, 2013). The ultimate responsibility, however, is to give voice to individuals who have been silenced in society.

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VITA

Kristen Scott was born November 29, 1969, in Jefferson, Iowa and raised in Jamaica, Iowa. She was educated at Yale, Jamaica, Bagley (Y.J.B.) Community Schools in Jamaica, Iowa. She then pursued her undergraduate studies and was awarded a B.S. in History and Secondary Education from Iowa State University at Ames in 1993. She later returned to academics to earn a M.S. in Education Administration at the University of Kansas in 1998.

Upon graduation, Mrs. Scott relocated to the Kansas City area and began teaching in a large urban school district. During her career with the school district, she has also served as an assistant principal and principal, and she is currently serving in district leadership.

Mrs. Scott entered the University of Missouri-Kansas City Doctor of Education program in order to further her education and her professional journey. Upon completion of the Doctor of Education degree, Mrs. Scott plans to continue her career in the district where she has spent her entire educational career.