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A Quantitative Comparison of the Reading Achievement of English Learners in Dual Language and Transitional Bilingual Programs

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A QUANTITATIVE COMPARISON OF THE READING ACHIEVEMENT OF ENGLISH LEARNERS IN DUAL LANGUAGE AND TRANSITIONAL BILINGUAL PROGRAMS

Shajaira P. López
Educational Leadership Doctoral Program

Submitted in partial fulfillment of the requirements of Doctor of Education in the Foster G. McGaw Graduate School

National College of Education
National Louis University
June, 2016
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Approved:

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Chair, Dissertation Committee   Program Director

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Member, Dissertation Committee  Director, Doctoral Programs

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Member, Dissertation Committee  Dean, National College of Education

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Dean’s Representative         Date Approved
DEDICATION

This dissertation is dedicated to my supportive parents, Ernesto and Sarah Larrier. Dad, I am grateful for the encouragement you provided me with throughout my educational journey. Mom, memories of you were the main inspiration to complete this dissertation. This dissertation is also dedicated to my loving husband, Mauricio Lopez. Gracias por apoyarme emocional y financieramente para lograr que mis sueños se hagan realidad. I am forever thankful to the three of you.
ABSTRACT

One of the goals of bilingual education research is to identify programs that have shown to be effective in increasing the English proficiency of English learners (ELs). The purpose of this archival comparative study was to conduct a quantitative comparison of the English reading achievement of third grade ELs enrolled in dual language education (DLE) programs to those enrolled in transitional bilingual education (TBE) programs in order to determine which program is more effective in improving the reading proficiency of third grade ELs in the Chicago Public Schools. The data analyzed in this study were the 2010-2014 reading scores on the Illinois Standards Achievement Test (ISAT) and reading proficiency levels on the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs). Independent sample t-tests were used to compare the data, from two DLE programs and two TBE programs, in order to test hypotheses that predicted that ELs in DLE programs would score significantly higher than those in TBE programs. The findings did not support the hypotheses. Overall, there was not a statistically significant difference between the ISAT reading scores of the two groups; however, ELs in the TBE programs obtained significantly higher reading proficiency levels on the ACCESS for ELLs. The findings of this study are significant because they provide the CPS with information that can be used to evaluate programming options and make decisions for the success of ELs, but most importantly, the findings provide support for the need of long-term analysis of the impact of language acquisition programs.
ACKNOWLEDGEMENTS

I am appreciative of the individuals who selflessly assisted me during my doctoral dissertation pursuit, and it is with the sincerest gratitude that I acknowledge them for their active part in this process. I want to give a heartfelt thanks to my dissertation chair, Dr. Vicki Gunther, for her unwavering commitment to see that this dissertation was completed, and to the members of my dissertation committee: Dr. Jason Stegemoller, Dr. Carlos Azcoitia, and Dr. Madi Phillips. The recommendations they made strengthened this work.

I would like to thank two individuals who took time out of their workday to assist me: Dr. Diego Giraldo for helping me narrow my research topic, and Dr. Sonia Soltero for providing me with feedback on my topic.

I would like to thank Dr. Maria Josefina Vargas for providing me with suggestions on how to collect the data for this study, and thanks to the Chicago Public Schools’ Office of Language and Cultural Education Deputy Chief Jorge Macias for sharing with me some information about the language acquisition programs in this study.

I would also like to thank the men and women who kindly served me coffee at the Romeoville Starbucks where I spent countless hours drafting this dissertation. Thanks to my friend and former colleague, Edmee Cappas Velez, for letting me use her new laptop when mine stopped working. Finally, a heartfelt thanks to my husband, Mauricio Lopez, for pretending that he was legitimately interested in every aspect of this study.
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CHAPTER ONE: INTRODUCTION

Making sure we offer all our kids, regardless of race, a world-class education is more than a moral obligation, it’s an economic imperative if we want America to succeed in the 21st century. But it’s not something that can fall to the Department of Education alone. It’s going to take all of us; public and private sector, teachers and principals, parents getting involved in their kids’ education, and students giving their best; because the farther they go in school, the farther they’ll go in life (The White House, 2010).

President Barack Obama’s words reflect the focus of the U.S. Department of Education since 2010 in its quest to once again make the United States the nation with the largest number of college-educated people. This is an immense undertaking for the federal government given the percentage of college educated people across the nation—in 2014 only 46% of 25 to 34 year-olds obtained a college degree—which places the United States in seventh place among the 34 nations that are members of the Organization for Economic Cooperation and Development (OECD, 2015). Also, only 38% of 12th graders in 2013 were considered proficient in reading, an essential skill for success at the college level (Kena et al., 2015). With percentages like those, it is imperative for federal and state governments to work towards creating promising education policies that are based on evidence and best practices—not just on inclination.

Education critics believe that the reason why our nation cannot outperform other countries in educational attainment can be attributed to its inability to provide an adequate education to individuals in low-income households (Nichols, 2011). If the federal government wants the United States to have the highest
proportion of college graduates in the world, then it must develop visual acuity on the obstacles that our students face due to their socioeconomic status (Nichols, 2011). However, educating our nation’s bottom half of the income distribution has been at the center of education policy reforms for well over a decade. Thanks to provisions under the No Child Left Behind [NCLB] Act of 2001 (2002), policymakers have, at the very least, ensured that school districts across the nation become more transparent about the progress of at-risk students based on zip code, race, disability, learning need, family income, and English proficiency (Brenchley, 2015). This, in turn, revealed ongoing issues, such as a 30-year 40% achievement gap in reading and mathematics between fourth and eighth grade English learners (ELs) and their English-proficient peers (Leos & Saavedra, n.d.; National Assessment of Educational Progress, 2015).

The achievement gaps between ELs and English-proficient students are a deeply rooted challenge for states, school districts, and individual schools, but NCLB (2002) created a starting-point to focus on this problem that was upheld by its replacement—the Every Student Succeeds Act (ESSA) of 2015. The traditional approach to respond to the English language acquisition needs of ELs has been to ignore what the research on best instructional practices recommends and assume that with time ELs will somehow learn as easily as their English-proficient peers (National Education Association, 1966). This practice has been the biggest contributing factor to the discrepancy in educational attainment between these two groups, but with the ESSA (2015) the
hope is for schools to continue to be purposeful in their attempts to address the glaring disparities. For example, schools have to follow the states’ established English language proficiency standards that provide a path for educators as they navigate the English-acquisition instructional journey; every EL must participate in the statewide assessment system that measures their progress towards becoming proficient in reading, writing, listening, and speaking in English; and every EL that has attended a public school for at least one year must participate in the state-specified standardized achievement test (ESSA, 2015). The most impactful change proposed by the ESSA (2015) was to mandate the inclusion of ELs in states’ accountability systems. This means that schools should be held fully accountable for the academic and English-language proficiency growth of all of their ELs.

Even with the ESSA (2015) requirements for the instruction, assessment, and accountability of ELs, the question of what is the best approach to close the achievement gap remains unresolved in most our schools’ practices and district policies. Properly addressing the educational needs of ELs who have come to school with varying degrees of proficiency in English has proven to be a challenge for public schools across the nation (Collier & Thomas, 2009). In the case of the Chicago Public Schools (CPS), this school district seeks to ensure that ELs develop two languages at high levels of proficiency by offering dual language education (DLE) programs in 15 of its schools (Chicago Public Schools, 2016). With the rising popularity of DLE programs across the nation
(Garcia, 2015), these 15 CPS DLE programs draw positive attention from parents, educators, and researchers who are committed to bilingual education. Nevertheless, the question of whether or not ELs enrolled in these CPS DLE programs are performing at higher levels than their peers in transitional bilingual education (TBE) programs has not been addressed by empirical research. Therefore, the goal of this quantitative study was to compare the achievement of ELs enrolled in dual language education programs to that of ELs enrolled in transitional bilingual education programs in order to determine which program is more effective in improving the reading proficiency of ELs in the Chicago Public Schools.

**Rationale for the Study: A Vignette**

In 2006, a seventh grade teacher of a dual language education program in the Chicago Public Schools (CPS) had only 14 students in her homeroom. Surrounding those 14 students sitting in 14 desks, were posters on the parts of speech, word walls, skillfully decorated bulletin boards, colorful curtains, classroom rules, all the little things that make a classroom look alive—things that would fool the inexperienced eye into believing that great instruction took place in that classroom every day. Yet no one saw that every day that seventh grade teacher went home frustrated, searching for answers, feeling incompetent, and at times she cried tears of embarrassment that only she knew about. Every tear she shed enveloped the thought of each of her students. And so she cried 14 tears, each of which carried the realization that as a first year teacher she was
not equipped to meet the disparate needs of her students. One of those tears, however, was bigger than the others. It was the tear she cried for her one and only English learner student, because she did not have the skills or pedagogical understanding to help him. Truth was, even though she worked in a dual language school, she had never attended a bilingual education teacher preparation course.

That is how my story began. I was that first year teacher in desperate need of a better understanding of pedagogy and language acquisition theory. Had it not been for my veteran colleagues who took me under their wings, perhaps that English learner would not have made it through seventh and eighth grade. Every time I think about this student, I not only regret the disservice I provided him with, but I also think about the disservice that many other schools could be providing to their own English learners (ELs) by placing them in the classroom of unskilled teachers or by not providing their ELs with a quality language acquisition program.

I immediately went on to obtain my bilingual teacher certification, but even after that I always questioned what many of my professors and colleagues claimed to be true about bilingual education programs: that dual language education (DLE) programs were the best, transitional bilingual education (TBE) programs were okay, and that stand-alone English as a second language (ESL) programs were not ideal but better than nothing. I questioned their comments, not only because of the inconsistencies that I witness while working at a DLE
program in the CPS, but mostly because I am a product of a stand-alone ESL program where with just one year of ESL instruction in third grade, my confidence and proficiency in the English language grew exponentially. In no way do I think that a stand-alone ESL program is a better alternative than bilingual education programs; however, my personal experience as an English learner made me think about the English learner I had as a student during my first year teaching, and it made me wonder if DLE programs in the CPS are truly doing what is best for their English learners.

**Background of the Problem**

The National Education Association (2015) expects that by 2025 English learners (ELs) will comprise one-fourth of the student population in the nation. The growing number of ELs, along with the increased expectations for their academic achievement, has considerable impact on schools as they work to meet the challenges of ensuring ELs are college and career ready. Schools must develop a path to achievement gap closure as well as provide high quality education for ELs that respects and incorporates their native language in order to ensure that they acquire the English language (Adams & Jones, 2005).

To better understand the type of education that ELs need, researchers recommend that the social and language acquisition theories such as those proposed by Vygotsky (1982, cited in Daniels, 1996), Krashen (1982), and Cummins (1976 & 2000) be taken into account because they provide a
perspective needed to understand the process of academic learning and language acquisition.

Vygotsky proposed that students possess what’s known as a Zone of Proximal Development (ZPD)—a difference between what students know and can do on their own, and what they cannot—and that it is important for teachers to provide instruction and the social interaction students need to move from what they know to what they do not yet know (Daniels, 1996). Whereas, Krashen’s (1982) Acquisition/Learning Hypothesis states that language can be acquired and learned, and his Input Hypothesis goes on to explain that in order for acquisition to occur through the formal instruction of language, the input needs to be comprehensible and must become slightly more complicated with time.

Cummins (1976) proposed the Threshold Hypothesis in which he states that there are threshold levels of language ability that a second language learner must attain in order to avoid cognitive drawbacks and, instead, allow the beneficial aspects of bilingualism. Cummins (2000) also proposed the Developmental Interdependence Hypothesis which states that proficiency in the second language is dependent on the proficiency level students achieve in their first language; and the Common Underlying Proficiency (CUP) Model, which in essence states that knowledge of either language should encourage the proficiency level underlying both languages, given proper motivation and exposure to both languages.
Together, these theorists offer a perspective that provide researchers and education practitioners with background knowledge to understand the language acquisition process, which in turn allows them to determine which programs may be better suited for ELs.

Nevertheless, understanding the theoretical frameworks of language acquisition and academic learning is not enough. In order to help determine which specific language acquisition programs are better fitted for ELs, Collier and Thomas (2004) believe that it is important to analyze the achievement gaps of ELs and their English-proficient peers to identify how students are doing and to determine whether or not the language acquisition programs are effective. In their analysis of the progress of three bilingual education programs from grades 1-6, Collier and Thomas (2004) reported that all of the programs closed the achievement gap for their ELs; however, the variation in the rate in which each program closed the gap depended on how each program was structured. Although transitional bilingual education (TBE) programs provided important support for ELs during the 1-4 years of program participation, Collier and Thomas (2004) concluded that four years was insufficient time to completely close the gap. The key contribution this analysis made to bilingual education research is the identification of programs that were in fact closing the achievement gap between ELs and their English-proficient peers—dual language education programs.
In the United States, dual language education (DLE) programs are a form of bilingual education that uses two languages—English and the partner language—to teach ELs and English-proficient students literacy and content. DLE programs are viewed as an additive approach to instruction because, rather than ignoring the student’s native language, it is used in classroom instruction in order to develop the second language and further expand the student’s mother tongue with the ultimate goal of bilingualism, biliteracy, multiculturalism, and high levels of academic achievement (Ovando, Collier, & Combs, 2003; Howard et al., 2007). This additive language acquisition program is linked to higher student outcomes thanks to the instructional approaches used. Alanis and Rodriguez (2008) concluded that the power of DLE is in the teaching philosophy of its teachers. Teachers have to see DLE as an enrichment program instead of a remediation program and not emphasize language development over academic achievement—the two are equally important (Alanis & Rodriguez, 2008; Christian, Howard, & Loeb, 2000).

On the other hand, the most widely used approach to bilingual education in the U.S. is the transitional bilingual education (TBE) program. TBE programs provide ELs with instruction in their native language, but they are considered a subtractive form of bilingual education because even though the EL’s native language is used, the ultimate goal is solely second language proficiency (Ovando et al., 2003). Thomas and Collier (1997) believe that TBE programs tend to be “remedial in nature” (p.18); while Crawford (2004) contends that
bilingual education programs that use the native language to develop the second language and utilize a gradual transition to English have often proven superior in promoting long-term achievement among at risk students.

**Statement of the Problem**

The education of English learners (ELs) is gaining more attention due to the rapid growth of this population and the indisputable academic achievement gap that exists between ELs and English-proficient students (Valencia et al., 2004; Batalova, Fix, & Murray, 2007). In Illinois, the reading achievement gap between ELs and their English proficient peers is reflective of the national achievement gap—on average, there is a 40% achievement gap in Illinois between ELs and non-ELs across grades 3 through 8 (Illinois State Board of Education, 2014). The same reading achievement gap can be seen since 2012 in Illinois’ largest school district: Chicago Public Schools (CPS) (Illinois State Board of Education, 2014). The problem of the achievement gap between ELs and non-ELs calls for ongoing studies.

A closer look at dual language education (DLE) and transitional bilingual education (TBE) research studies suggest that DLE programs are an effective way to address the linguistic and academic needs of ELs (Lindholm-Leary, 2001; Thomas & Collier, 2002; Howard, Christian, & Genesee, 2004; Nascimento, 2011). However, there are also documented achievements of ELs in TBE programs at the elementary level (Baker, 2006; Gomez, Freeman & Freeman, 2005; Thomas & Collier, 2002); and other studies that have not found significant
differences between the achievement of ELs in DLE and TBE programs (Fralick, 2007; Trejo, 2005; Montes, 2005; Jonathan, Kim & Franking, 2012).

Given that researchers have provided contrasting answers about the effectiveness of DLE and TBE programs, it is crucial for bilingual education researchers to continue to add to the body of research utilizing varied student samples; especially in large urban school districts—like the CPS—that will be impacted by the predicted influx of ELs. For this reason, this study addresses which of two programs is more effective in countering the problem of the underperformance of ELs in CPS by comparing the reading achievement of ELs enrolled in DLE programs to those in TBE programs.

**Purpose of the Study**

The purpose of this archival quantitative study was to compare the reading achievement of third grade English learners (ELs) enrolled in dual language education (DLE) programs with those enrolled in transitional bilingual education (TBE) programs in order to determine which program is more effective in improving the English reading proficiency of third grade ELs in the Chicago Public Schools (CPS). This information is critical for district and school administrators to have in order to determine which programs benefit their students and how they can interpret their students’ third grade achievement data. It could also serve as a foundation for future research that compares the achievement of ELs of in these two programs at various grade levels. Ultimately, this study provides the CPS with information that can be used to fulfill the
demands of the Every Student Succeeds Act (ESSA) of 2015 that expects school
districts to create a plan to meet the learning needs of their students.

A comparative design was used in order to analyze archival third grade
student reading test data. This grade level was selected for the following
reasons: (1) Illinois state-wide accountability testing begins at the third grade
level; (2) this was the grade level with the largest EL sample size in CPS; (3)
there is a shortage of research comparing DLE and TBE programs at the third
grade level; and (4) this is the grade level where most ELs begin to acquire
English proficiency. Reading proficiency was selected as the focus because it is
an area of focus in second language acquisition research and ELs’ reading
scores were consistently the lowest among the academic subjects reported in
several studies (Collier & Thomas, 2004; Howard et al., 2004).

This study compared the English reading proficiency of third grade DLE
students to third grade TBE students, in order to test hypotheses that were
developed from the results of a recent bilingual education study performed by
Nascimento (2011), who found that ELs in grades K-3 who attended a DLE
program scored significantly higher than K-3 ELs who attended a TBE program.

**Research Questions**

In order to help provide a clearer picture of what types of language
acquisition education programs work well to increase the reading proficiency of
third grade students in the Chicago Public Schools system, the following
research questions were developed to guide the study:
Research Question 1: Is there a significant difference in the reading scores of English learners on the Illinois Standards Achievement Test between those enrolled in third grade dual language education programs and those enrolled in third grade transitional bilingual education programs?

Research Question 2: Is there a significant difference in the reading proficiency levels of English learners on the ACCESS for ELLs between those enrolled in third grade dual language education programs and those enrolled in third grade transitional bilingual education programs?

Once the data was collected and analyzed, the following additional research questions were developed:

Research Question 3: Is there a significant difference in the Illinois Standards Achievement Test reading scores of third grade English learners enrolled in different dual language education programs?

Research Question 4: Is there a significant difference in the Illinois Standards Achievement Test reading scores of third grade English learners enrolled in different transitional bilingual education programs?

Research Question 5: Is there a significant difference in the ACCESS for ELLs reading proficiency levels of third grade English learners enrolled in different dual language education programs?

Research Question 6: Is there a significant difference in the ACCESS for ELLs reading proficiency levels of third grade English learners enrolled in different transitional bilingual education programs?
Research Design

This archival quantitative study used a comparative design to gain insight on two language acquisition programs—dual language education (DLE) and transitional bilingual education (TBE). The data utilized in this study were from students enrolled in the Chicago Public Schools (CPS) between 2010-2014 and include the following:

1. Individual reading scale scores for third grade English learners and English-proficient students on the Illinois Standards Achievement Test (ISAT)
2. Individual reading proficiency levels for third grade English learners on Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs)

The independent variable in this study was the type of instructional programs, DLE or TBE. The dependent variables were the students’ scores on ISAT and ACCESS for ELLs. Independent sample t-tests were used to compare the data in order to determine if there is a statistically significant difference between two groups (DLE v. TBE) in each of the dependent variables.

Additional analyses were conducted utilizing independent sample t-tests. Two analyses compared the performance of the two DLE programs, to each other, in each of the dependent variables; and the other two analyses compared the performance of the two TBE programs, to each other, in each of the dependent variables.
Definition of Terms

It is without question that variables can have different definitions among various studies. For this reason, it is important for a researcher to be clear on how variables are defined in a particular study by developing definitions for every variable, what Creswell (2015) refers to as operational definitions.

The operational definitions for this study are:

Dual language education (DLE): A type of bilingual education program that provide students with instruction in the core content areas, in two languages. The goal is for all students to achieve high levels of bilingualism and biliteracy, at- or above-grade level performance in all academic areas, and to ensure students develop positive "cross-cultural attitudes and behaviors" (Chicago Public Schools, 2016).

English learners (ELs): Students who come from diverse linguistic and cultural backgrounds whose English language proficiency levels require that they receive language support in order to properly access grade-level work in English (WIDA, 2012).

English-proficient students: Students who are competent in reading, speaking, listening, and writing in the English language (WIDA, 2012). English-proficiency in the Chicago Public Schools is solely determined by students’ performance on the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) language proficiency assessment. In 2014, ACCESS for ELLs stipulated that for an English
learner to be classified as English-proficient, he or she had to achieve a score of at least 5.0 on the composite proficiency level and at least 4.2 on the literacy proficiency level (Illinois State Board of Education, 2013). However, different cut scores were used between 2010-2013: at least 4.8 on the composite proficiency level and at least 4.2 on the literacy proficiency level. The composite proficiency level is a compilation of the scores ELs’ obtained on the four language domains, but it is accounted for in the following way: 15% listening score, 15% speaking score, 35% reading score, and 35% writing score. The literacy proficiency level only takes into account 50% reading score and 50% writing score (Illinois State Board of Education, 2009).

Reading proficiency: A student’s competence in processing language through reading (WIDA, 2012). On the ACCESS for ELLs, reading proficiency is based on the levels of the WIDA English Language Development Standards: 1-entering, 2-emerging, 3-developing, 4-expanding, 5-bridging, 6-reaching (WIDA, 2012). On the Illinois Standards Achievement Test (ISAT), reading proficiency is measured by the Illinois Learning Standards, and qualified by the following performance levels: academic warning, below standards, meet standards, and exceeds standards (Illinois State Board of Education, 2014b)

Transitional bilingual education (TBE): A type of bilingual program that provides instruction through the use of the students’ native language (home language) in order to support his or her acquisition of the English language (Chicago Public Schools, 2002). The Chicago Public Schools only provides TBE
programs in schools that have 20 or more ELs who speak the same home language (Illinois Administrative Code 228.25(a)).

**Summary**

The growing number of English learners impact the way schools work to meet their needs, and the problem of the underperformance of English learners—as seen by the continued 40% achievement gap across the U.S. and in Illinois—support the need for additional research in order to determine which programs work better for this population of students (Leos & Saavedra, n.d.; Illinois State Board of Education, 2014; National Assessment of Educational Progress, 2015). Even though researchers agree that transitional bilingual education programs can ensure academic growth, most believe that when compared to dual language education programs, transitional bilingual education programs are not deemed nearly as successful (Baker, 2006; Hofstetter, 2004; Thomas & Collier, 2002). On the other hand, recent studies have not found significant differences in the achievement of English learners in either program. For this reason, this archival quantitative study will compare the reading achievement of third grade English learners enrolled in dual language education programs with those enrolled in transitional bilingual education programs in order to determine which program is more effective in improving the reading proficiency of third grade English learners in the Chicago Public Schools.
CHAPTER TWO: LITERATURE REVIEW

Introduction

Throughout the years, numerous terms have been utilized to refer to the growing population of students who enter school speaking a language other than English, such as: English as a second language (ESL) student, second language learners, limited English proficiency (LEP) student, and language minority students (Gersten et al., 2007). These terms have changed with time as well as with fluctuating political interests. Currently, English learner (EL) students and English learners (ELs) are terms used to describe this population because they emphasize learning, “rather than suggesting that non-native English-speaking students are deficient” (National Council of Teachers of English, 2008, p. 2), and they acknowledge that these students are learning more than just language—they are also learning the culture and values of a society whose main language is English. These changes are evidence of the extensive history of educating ELs, some of whom have been educated through the use of inconsistent or controversial approaches (Gil & Bardack, 2010).

Unfortunately, the question of what is the best approach to teach English to ELs remains unresolved as evidenced by state policies and school practices. Regardless of the availability of research evidence to support various approaches to teach ELs, “the lack of clarity on research-based instructional methodology, coupled with many preconceived notions, contributes to confusion about appropriate policies, goals, strategies, and outcomes for ELs” (Gil & Bardack,
2010, p. 1). Often times, even researchers who want to be a part of the solution experience issues making comparisons among states with respect to ELs’ learning progress, because each state may have different policies and approaches to determine which students are classified as ELs (Batalova, et al. 2007). There are also methodological issues in bilingual education research such as the differences in results based on the grade levels of the students involved, the length of time enrolled in a bilingual program, and the varying amount of time that is spent in a particular language of instruction (Hinkel, 2011).

Although there is a scarcity of large scale, quantitative research on the effects of bilingual education programs, it is useful to consider the results of the studies and bilingual program evaluations available. The goal is not to find a one-size fits all solution, but to be informed of the various language acquisition programs, to comprehend their philosophies and practices, and to base pedagogical decisions on informed viewpoints (Jin & Cortazzi, 2011).

This review of literature will report the current state of ELs across the U.S. and the Chicago Public Schools district in order to uncover the urgency in understanding and meeting their education needs. Also, an explanation of various language acquisition theories, language acquisition programs—dual language education (DLE) programs and transitional bilingual education (TBE) programs—and highlights of related quantitative research that have been conducted for the two programs will serve to clarify any misconceptions or misunderstandings about their effectiveness.
The Condition of Education for English Learners

Students who are identified as needing instructional support in order to access grade-level content due to their proficiency level in the English language are referred to as English learners (ELs) (WIDA, 2012). In the school year 2012-2013 ELs made up 9.2% of K-12th graders enrolled in American public schools (Kena et al., 2015). Although the same reports showed that ELs are located in every state, the highest numbers of ELs are concentrated in the Western portion of the country. Illinois, a Midwestern state, is placed eighth on the list of states with the largest population of ELs (Soto, Ariel, Hooker, & Batalova, 2015). Of the 211,619 ELs enrolled in Illinois during the 2014-2015 school year, an astounding 33% were enrolled in the Chicago Public Schools (CPS) alone. It is predicted that by 2025, ELs will become 25% of the U.S. student population (Lyons, 2014), a trend that can also be expected in the states that have the largest population of ELs.

The growing number of ELs, heavily concentrated in specific school districts, impact the way schools work to meet their needs; however, in order to create a clear picture of the condition of public school education for ELs, it is important to not look at their performance in isolation, but to analyze the achievement gaps between them and their English-proficient peers (Collier & Thomas, 2004). Collier and Thomas (2004) believe that gap-closure research can help educators determine how ELs are doing and whether or not a specific language acquisition program is effective.
Achievement Gap

Since 1998, the National Assessment of Educational Progress has collected student achievement data nationwide (Kena et al., 2015). Its 2013 report showed that the national reading achievement gaps between ELs and English-proficient students in 4th and 8th grade were not significantly different from the gaps in either 2011 or 1998 (Kena et al., 2015). According to the Illinois State Board of Education (2014), the 2014 reading achievement gap between 4th grade ELs and English-proficient students in Illinois was 49 points, and the reading achievement gap between 8th grade ELs and English-proficient students in Illinois was 54 points. The 2010-2014 reading achievement gaps of 4th and 8th grade ELs and non-ELs in the Chicago Public Schools (CPS), shown in Figure 1, on the following page, are comparable to that of Illinois.

Given the discrepancy in reading achievement between ELs and their English-proficient peers, schools must place a high importance in the reading attainment of ELs to guarantee reading proficiency. By reading proficiently, students are able to become lifelong learners and participate in a progressively more literacy-based society. Unfortunately, learning to read in a second language is challenging for ELs (Snow et al., 1998). Although there are ELs who attain speaking and listening proficiency in English after only two years in a language acquisition program, attaining proficiency in reading takes considerably longer (Snow et al., 1998), and it is up to states and school districts to be mindful of these realities and create policies and programs that will help close the academic
achievement gap between ELs and their English-proficient peers (Genesee et al., 2006).

**Figure 1.** Fourth and eighth grade reading achievement gap between English learners and English-proficient students in the Chicago Public Schools

English learners were the students identified as requiring language support to achieve grade-level content due to their English language proficiency levels. Non-English learners were students who were English-proficient making them competent in reading, speaking, listening, and writing in the English language. Source: Illinois Report Card, 2015
Policies and Practices

Variants such as the grade levels in which ELs enter a district can affect a student’s English language-proficiency level, as well as the language-acquisition approach taken by districts. If ELs enter at the elementary level, they have the advantage of more time to learn English and grade level content, compared to ELs who enter at the secondary level. That leads to a serious problem discussed by Collier and Thomas (2004): the idea (based not on research, but on convenience) that ELs should achieve grade-level proficiency in English in just three years. Hence, many language-acquisition programs are created with the goal of eliminating language support for ELs after they have been in the program for three years; however, the student achievement data does not support this practice.

The Illinois State Board of Education (ISBE) requires that ELs enrolled in schools where 20 or more students speak their native language be provided with an opportunity to participate in bilingual education programs for a minimum of three years, or until the student achieves a level of English language proficiency that will allow him or her to participate in classrooms where instruction is provided in English only (Illinois Administrative Code 228.25(a)). The ISBE’s bilingual education policy also states that ELs may remain in the bilingual program for a period longer than three years at the discretion of the school district and with parental consent. However, the CPS’ bilingual education policy does not make a provision for the possibility of students remaining in the bilingual
education program longer than four years, if deemed necessary (Chicago Public Schools, 2002). ELs in Chicago public schools can be simply exited from the bilingual education program (i.e. transitional bilingual education program) after three years (Vargas, 2006), and based on the district’s bilingual education policy, that has been in effect since 2002, the only provision made—the Framework for Success—states that a fourth year of bilingual education services will be provided “to students who complete their third year but… are found to require additional bilingual services” (Chicago Public Schools, 2002, p. 2). Yet nothing is stated about students that may require five or more years of language acquisition services.

In Illinois, ELs are exited from a language acquisition program after attaining the score in English-language proficiency (ELP) required by a test called Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) (Illinois State Board of Education, 2015). In 2013, only 22% of ELs obtained the required ELP score on the ACCESS for ELLs; meaning that 78% of them did not achieve an ELP score that would allow them to leave the program (Illinois State Board of Education, 2015). The percentage of students attaining the required ELP score was, however, greater for ELs who had been in language acquisition programs for more than three years (57%) than for ELs who had been in the program for only two to three years (30.72%) (Illinois State Board of Education, 2015). These findings are consistent with the studies conducted by Collier & Thomas (2004)—
they concluded that it takes ELs six to eight years to reach grade-level English proficiency, and that those results are achieved only through very good one-way and two-way dual language programs.

Although school districts such as the CPS can stipulate a maximum amount of years that bilingual education programs are provided, researchers strongly oppose this practice (Collier & Thomas, 2004; Lindholm-Leary, 2005; Vargas, 2006). To make matters worse, the majority of ELs in U.S. public schools are enrolled in programs that are not of good quality; instead, these programs simply focus on the speed at which students exit them (Gandara, 2015), or they are simply poorly implemented programs (Baker, 2006). Fortunately, this disservice being done to ELs has not gone unnoticed by the federal government.

Access to quality education has been a source of concern for the federal government; as a result, they have been involved in various initiatives to ensure students access to an equitable education. For example, the Office of Civil Rights and the Department of Justice identified areas that frequently involve non-compliance by school districts while attempting to meet their federal obligations to ELs (U.S. Department of Education, 2015). These issues were communicated by the U.S. Department of Education (2015) in a Dear Colleague letter to educators that offers guidance such as:

- Provide EL students with a language assistance program that is educationally sound and proven successful;
- Avoid unnecessary segregation of EL students;
• Meet the needs of EL students that opt out of language assistance programs to ensure their progress with respect to acquiring English proficiency and grade level core content;
• Evaluate the effectiveness of district’s language assistance program(s) to ensure that EL students in each program acquire English proficiency and that each program was reasonably calculated to allow EL students to attain parity of participation in the standard instructional program within a reasonable time. (p. 8-9).

Provisions like these are necessary if the federal government wants to ensure that the educational needs of ELs are met, and the same happens at the state level. The Illinois State Board of Education (ISBE) periodically visits schools to determine if they are providing ELs with the instruction required by the federal government and appropriately spending funds intended to help them. When the ISBE visited the Chicago Public Schools (CPS) between January 26, 2015 and February 11, 2015, they found that the district had “failed to adequately teach thousands of students who speak limited English” (Mitchell, 2015, para. 3). Catalyst Chicago, the watchdogs of school improvement in Chicago, reported that, overall, the CPS had fully implemented only about a fourth of the 45 required components of English-learner services (Belsha, 2015). Among the problems that the Illinois State Board of Education (2015) found were:

• 1,143 out of 58,188 ELs did not take the annual assessment for English language proficiency in 2014.
• In some cases, students are exited from the TBE/TPI program services prior to achieving English language proficiency.
• There are inconsistent procedures across attendance centers regarding monitoring progress of students who have exited the TBE/TPI program for two years after they transition into the general education program.
- In some of the attendance centers in the district, students are placed into part-time TBE programs before their English language proficiency assessment results and other characteristics indicate that they have sufficient proficiency in English to benefit from a part-time program.
- In some of the attendance centers that offer part-time TBE program services, no services are available for students in certain grade levels.
- Some of the attendance centers in the district do not provide instruction in ESL and other language support services to the ELs eligible for a transitional program of instruction.
- Some attendance centers do not have adequate or sufficient native language and ESL instructional materials to meet the needs of English learners.
- Not all the attendance centers provide program options for parents who refused or waived services of a TBE/TPI program.
- Not all of the attendance centers ensure that parents of English learners are provided with information about school events and school activities in their home languages, so that their children have the opportunity to participate fully in extracurricular activities.
- Not all of the attendance centers that offer summer school programs provide TBE/TPI services for ELs.

After receiving the result of the ISBE's report, the CPS Office of Language and Cultural Education, the department that oversees language acquisition programs, expressed that their plan is to “establish a firm baseline and work towards better supporting schools” (Belsha, 2015, para. 4).

**Language Acquisition**

In order to understand what it takes to service English learners (ELs), it is important to take into account several theories on language development and language acquisition. The theoretical perspectives described below explain the process ELs go through in order to acquire a second language.
Vygotsky (1982, cited in Daniels, 1996) proposed the social theory—Zone of Proximal Development (ZPD)—which stipulates that there is a difference between what students can do on their own and what they can do with the support of others. In the case of language education, the teacher’s support and students’ collaborative efforts are pivotal for second language development. The ZPD asserts that the teacher’s most essential role is to deliver instruction and allow for the social interaction students need to move from what they know to what they need to know. This social interaction that produces “authentic discourse in the target language is imperative for learners to use and acquire the language” (Briceño, 2013, p. 16). In other words, the ZPD uses “social interactions with more knowledgeable others to move development forward” (Blake & Pope, 2008, p. 62). These interactions can be with the teacher or peers, but ultimately teachers interact with students in order to collaboratively construct knowledge by challenging and broadening their current level of development and providing support so that students are able to move to the next stage within their ZPD.

Vygotsky’s ZPD has been often related to an idea proposed by Krashen—the Input Hypothesis (Dunn & Lantolf, 1998). Krashen’s Input Hypothesis states that “humans acquire language in only one way—by understanding messages, or by receiving comprehensible input…that contains structures at our next stage—structures that are a bit beyond our current level of competence” (Krashen, 1985, p. 2). In order words, in order for language acquisition to occur through formal
instruction, the input needs to be comprehensible and must become slightly more complicated in order for a student to grow in the acquisition of the language. Krashen called this level of input i+1, where “i” is the learner’s level of competence, and “+1” is the next stage of language acquisition. Even though Krashen’s Input Hypothesis has often been related to the ZPD, Dunn and Lantolf (1998) caution against attempting to find connection between i+1 and ZPD because the theoretical frameworks underlying both constructs are themselves incommensurable since they suggest different conceptualizations of how people communicate and think. Krashen’s Input Hypothesis does not consider the role to social interaction in the language acquisition process—he believed that speaking does not play a role in language acquisition (Krashen, 1985). Dunn and Lantolf (1998) believe that in researchers’ eagerness to make a connection between i+1 and ZPD, they have read too deep into Krashen’s hypothesis and not deep enough in Vygotsky’s hypothesis which can serve to explain good instruction in general, not just language instruction.

Krashen argued that language acquisition occurs when learners receive input that they can understand, but he makes no mention of output; however, Swain (1985) argued that language learners need the opportunity to produce language—output. Swain noticed that students in French immersion classes did not achieve high levels of proficiency in French. These students were in classes where teachers did the vast majority of the talking, and they had limited opportunities to interact with peers. Noticing this, Swain (1985) proposed that
second language acquisition depends on output as well as input. Nevertheless, Freeman and Freeman (2011) caution against requiring second language learners in early stages of English acquisition to produce language too soon because it can have negative consequences, such as too much emphasis placed on correct pronunciation rather than comprehension. If effective language acquisition is to occur, learners need opportunities for both comprehensible input and output at levels students are prepared to produce (Freeman & Freeman, 2011).

Krashen (1982) also proposed the Acquisition/Learning Hypothesis, where he claimed that language can be both acquired or learned. Krashen (1982) believed that students acquire a new language subconsciously as they receive messages they understand. For instance, when a student is in an ESL classroom that has word walls with pictures that describe the words the teacher is using in the lesson; students acquire the second language in the process of trying to comprehend what the teacher is saying. The student is not focused on the language itself, instead, they are using it for a real purpose. Krashen (1982) contrasts acquisition with learning, where learning is what students do consciously as they focus on different aspects of the language. It is what happens in the classroom when teachers break the language down into parts, present each part to students one at a time, and provide the students with feedback to indicate how well they have mastered the different parts of the language. When language is acquired, there is meaningful interaction that
mimics natural communication; whereas when language is learned, there is
formal instruction on the language is provided.

Another theorist, Cummins (1976), proposed the Threshold Hypothesis
claiming that a threshold level of language proficiency must be reached in order
for students to reap the cognitive benefits of bilingualism. This threshold may be
different depending on the cognitive stage of the student; which led Cummins
(1976) to conclude that there are two threshold levels, and not just one. If a
student reaches the lower threshold level of bilingual competence (high level in
only one language) bilingualism will not bring about any cognitive effect, but
when students read the higher threshold level of bilingual competence (high
levels in both languages, or balanced bilingualism) bilingualism will have positive
cognitive effects. However, if the student only reaches a low level of competence
in both languages they will have negative cognitive effects (Cummins, 1976).

Cummins (2000) proposed the Developmental Interdependence
Hypothesis, where he claimed that second language proficiency is dependent on
the level of proficiency students achieve in their first language. The more the
learners develop their first language, the greater their possibilities to develop
their second language. Cummins (2000) also proposed the Common Underlying
Proficiency (CUP) Model, which in essence states that experience with either
language can encourage the development of the proficiency underlying the two
languages, given the proper stimulus and interaction with both languages.
Cummins (2000) developed the CUP model after seeing various studies that
showed that within a bilingual program, teachers can focus on developing a students’ first language literacy skills without detriment on the development of second language literacy skills. It also suggests that successfully developing the literacy skills of ELs’ first language can provide a foundation for long-term growth in their second language literacy skills (Cummins, 2000). Together the Developmental Interdependence Hypothesis and the CUP model support an important claim: If the development of one language is directly correlated to the development of the other language, and together, both languages are the path for cognitive development and knowledge acquisition, then, there is a positive correlation between the level of bilingualism and the level of cognitive development (Cummins, 2000).

**Literacy Development**

Theories regarding the acquisition of literacy in a second language have changed with evolving views on language development and related instructional practices. Goodman and Goodman (1990) argue that although “second-language learning is facilitated by the ‘advanced knowledge’ of the first language” (p. 230), the process of learning the native language and a second language are similar. Over a decade later, Genesee et al. (2006) used a similar principle and determined that literacy in the native language “contributes to and supports” the development of literacy in the second language (p. 81); and the research supports that principle.
Laija-Rodríguez, Ochoa, and Parker (2006) conducted a quantitative study of second and third grade English learners (ELs) in transitional bilingual education (TBE) programs and found that the best predictor of reading growth in the second language was development of the EL’s first language. Meaning that when ELs develop their first language they are able to transfer their native language skills and increase their chances of learning to read in their second language; which is consistent with Goodman and Goodman (1990) and Genesee et al. (2006). This is one of the strategies Goldenberg (2008) recommended to improve the English reading skills of ELs; however, Goldenberg (2008) and Cummins (2007) cautioned that this transfer of skills may not occur spontaneously. Teachers need to purposely teach ELs that the reading skills they have in their first language can also be applied to their second language.

However, Escamilla (1993) contends that not all elements of literacy are easily transferable, such as background knowledge. She suggests that ELs learning to read in a second language must also develop knowledge of cultural ideas and of forms of communication, in order to fully comprehend what they are reading, make connections, and relate to the text. The ability to connect with text goes beyond ELs’ ability to read, meaning that when ELs read in a second language they must have sufficient prior cultural knowledge to understand culture-specific nuances in the text (Soltero, 2004). For this reason, it is important for the literacy development of ELs to include more than just decoding, phonics,
and phonemic awareness; it is also necessary for teachers of ELs to focus on building students’ background knowledge.

In addition to having background knowledge on specific cultural subject matter, an EL’s self-perception also contributes to literacy development. Cummins (2000) explains that an EL’s self-perception and attitudes about their literacy skills contribute to their literacy development. Meaning that ELs that consider themselves literate in their first language will tackle the challenges of second language literacy with confidence—transferring the literacy strategies they acquired in their first language (Soltero, 2004).

**Dual Language Education**

Similarly as with numerous other complex concepts, dual language education (DLE) does not have one simple definition. Howard et al. (2007) defined it as a “program that provides literacy and content instruction to all students through two languages and that promotes bilingualism and biliteracy, grade-level academic achievement, and multicultural competence for all students” (p. 1). An earlier definition developed by Soltero (2004) described DLE as “a long-term additive bilingual and bicultural program model that consistently uses two languages for instruction, learning, and communication… in the pursuit of bilingual, biliterate, academic, and cross-cultural competencies” (p. 2). However, for the purpose of this study, DLE is defined based on the description and goals provided by the Chicago Public Schools. According to the Chicago Public Schools (2016), DLE programs provide students with:
• Instruction of core content areas in both English and Spanish;
• The opportunity to become biliterate, bilingual, and cross-cultural;
• The opportunity to develop two languages at high levels of proficiency;
• The means to achieve at or above grade level in all content areas in two languages.

DLE programs are usually offered for a period of six to eight years (Mora, Wink, & Wink, 2001), and can be implemented to meet the specific needs of language learners. According to the National Dual Language Consortium (2011), there are four kinds of dual language programs which differ according to the population they serve:

1. Two-way immersion programs (or two-way dual-language programs).
   These programs enroll a balance of native (or proficient) English speakers and native speakers of the partner language. The goal is to have both groups of students interact with each other in order to develop their partner’s language skills, while growing in proficiency in their native language;

2. One-way immersion programs (or one-way dual language programs).
   These enroll primarily native English speakers. The goal is for the students to grow their native language and at the same time learn the partner language.

3. Heritage language programs. These enroll students who are considered dominant in English but whose parents, grandparents, or other ancestors
spoke the partner language. The goal is to provide students with instruction in the heritage language through community-based programs and higher education; however, the goals of a heritage program are achieved through two-way dual language immersion at the K-12 level.

4. Developmental bilingual programs (sometimes called one-way dual language programs). These enroll primarily students who are native speakers of the partner language. The goal is for the students to grow their native language and at the same time learn the partner language.

DLE is viewed as an additive form of bilingual education because an EL’s native language is used in classroom instruction to support second language acquisition and to further develop the native language so that students become bilingual and biliterate (Ovando et al., 2003). The theoretical framework that supports DLE has three main components: (1) bilingualism theories, such as Cummins’ Common Underlying Proficiency Model, that highlight the importance of having solid native language literacy skills in order to learn a second language (Cummins, 2000); (2) theories, such as Vygotsky’s Zone of Proximal Development, that see learning as a social experience in which important communications are underlined as fundamental to the learning process (Blake & Pope, 2008); and (3) identification of effective instructional practices for language development and academic achievement (Soltero, 2004).

Based on extensive research in the field, leading dual language researchers and educators have distinguished various key program features that
make a profoundly effective DLE program (Thomas & Collier, 1997; Lindholm-Leary, 2001; Soltero, 2004). Figure 2 presents a compilation of the seven program features identified.

*Figure 2. Features of successful dual language education programs*

As explained by Soltero (2004), the length of participation refers to the length of time a school carries out a DLE program. In order for DLE programs to effectively accomplish their objective, they should be implemented no less than six to eight years, and parent collaboration must be seen by the families and the schools as the most important aspect among the features of a DLE program. Parents must know and comprehend the goals and pedagogical practices of the DLE program, and must understand their role in supporting their children’s linguistic, academic, and sociocultural development (Soltero, 2004). It is also
essential to have a balance of equal, or near equal, proportions between language minority students (speakers of the partner language) and language majority students, and that these two groups are together for at least 50% of their instructional day at all grade levels (Soltero, 2004). In terms of language use, there must be an unmistakable language separation that outlines the use of each language for instruction and communication, and bilingual instruction of content and literacy must be provided for all students (Soltero, 2004). Soltero (2004) stresses that quality instruction must be provided at all times to guarantee that all students are taught at their fullest potential.

**Dual Language Education Program Models**

DLE programs deliver academic instruction using two languages, with the non-English language commonly being used at least 50% of the time (Christian, 2011). In addition to that requirement, experts have laid out some basic requirements for successful DLE that determines how a program should be implemented—its model. A simple way to look at it is to determine whether the school community wants more or less of the target language; then again, the decision is actually more complex and it involves understanding the context of each school, language and educational background of the community, expectations for language proficiency, trained personnel, and the needs of the school and its community.
The most common DLE program models (graphically represented in Figure 3 on page 41) are:

1. The 90/10 and 80/20 Model. Instruction in these two models starts by using the partner language (the language other than English) for the greater percentage of time and then slowly decreasing the percentage until instruction in both languages is delivered for the same amount of time (Christian, 2011). In the case of the 90/10 model, in the initial grade of the program (usually kindergarten) 90% of instructional time is provided using the partner language and 10% of the time using English. Then in first grade it changes to 80% in the partner language and 20% in English. Second grade is a 70/30 ratio, third grade is 60/40, and from fourth grade on, instructional time is 50% in the partner language and 50% in English. The 80/20 model follows the same premise, but starts with 80% in the partner language and 20% in English. The major reason for establishing an 80/20 model as opposed to a 90/10 lies in parental and administrative preference.

2. The 50/50 Model. In this model, students spend an equal amount of time in the partner language as they do in English; 50% and 50% in every grade level (Christian, 2011).

3. The Gomez and Gomez Dual Language Education Program. This model is especially well suited for areas with high numbers of ELs. It is unique in that:
- It divides languages by subject rather than time;
- It provides instruction in each subject area, except for language arts, in only one of the two languages;
- It calls for activities that support the second language learner in the respective subject areas;
- It promotes the development of content biliteracy by the end of fifth grade;
- It requires the use of Bilingual Learning Centers from prekindergarten to first grade and promotes the use of project-based discovery learning through Bilingual Resource Centers beginning in second grade; and
- The language for morning announcements, morning activities, storytelling, music, computer lab, physical education, and library time alternates each day. (Gomez et al., 2005, p. 153)

With respect to which program model is better at developing proficiency in the English language, Lindholm-Leary (2001) conducted an analysis of several studies performed and found that both ELs and English-proficient students equally benefited from 90/10 and 50/50 programs. Therefore, whether they spent 10–20% or 50% of their day receiving instruction in English, there was no difference the students’ proficient in English. In regards to the Gomez and Gomez DLE model, there are currently no published research studies that address the difference in proficiency levels between this model and other DLE program models.
Figure 3. Dual language Education Program Models

Source: Soltero, 2004; Gomez et al., 2005
Transitional Bilingual Education

Transitional bilingual education (TBE) programs provide ELs with initial instruction through the use of their mother tongue in order to offer content area support until the student is able to transition into the target language—English (Martinez, 2008). The goal is to culturally and socially assimilate the students into the dominant, majority language and culture (Baker, 2006). The program is set up so that ELs gain the tools necessary to become successful in an English-only mainstream classroom. Once the student develops the minimum skills deemed necessary, the instruction in the first language is phased out, generally within three years, until all instruction is eventually conducted in English (Martinez, 2008).

The Chicago Public Schools (CPS) describes TBE as a type of bilingual program that is “an effective vehicle for providing students whose home language is other than English full access to equal education opportunity,” and “a means of providing instruction or other educational assistance through the home language of the students while the student is acquiring English proficiency” (Chicago Public Schools, 2002, p. 1). Illinois school law requires schools that have at least 20 ELs who speak the same native language are required to provide their ELs with a TBE Program (Illinois Administrative Code 228.25(a)). According to the Chicago Public Schools (2016b), ELs in TBE Programs must receive instruction in all of the following areas:

- Language Arts in the home language
• English as a Second Language (ESL) instruction to help develop students’ English Language Proficiency
• Core subjects (math, science, social science) provided in both English and the native language
• Instruction in the history and culture of the U.S.
• Instruction in the history and culture of the native land of the ELs (or of their parents)
• All instruction provided in English must include supports and modifications that are appropriate for the EL’s level of English language proficiency (para. 4).

In order for ELs to develop the language skills necessary to be successful in the mainstream classroom, TBE programs provide ELs with instruction that is mostly in a separate setting and where interaction with proficient English speakers is limited or nonexistent (Ovando et al., 2003). The pressure to exit ELs from TBE programs and into the mainstream classroom is so great that actual subject area content may be skimmed over to allow for emphasis on the English instruction. The argument used is that if competency in the majority language is not quickly established, ELs may fall behind their English-proficient peers (Baker, 2006). Therefore, arguments about equality of opportunity and maximizing student performance are used to justify the quick transitions.

TBE programs are commonly provided for a period of three years, and one of the following scenarios can occur after three years in the program: (a) ELs are exited from the TBE program because they attained an English proficiency level that allows them to fully participate in the mainstream classroom where only English is used; (b) ELs are exited from the TBE program because they have grown in their English proficiency, but continue to receive ESL support in order
be able to participate successfully in the mainstream classroom; or (c) ELs are not exited from of the TBE program because they have not exhibited sufficient English language proficiency growth, and are kept in the TBE program for additional time, with additional supports. Overall, contrary to Crawford's (2004) proposal, TBE researchers agree that while the achievement of ELs in TBE programs are notable at the elementary level—because they provide instruction in the ELs’ native language—the native language instruction that is integrated in a TBE program is not sufficient to assist ELs in reaching higher cognitive levels at secondary grade levels, where the difference between bilingual education programs is truly noted (Baker, 2006; Gomez et al., 2005; Thomas & Collier, 2002).

Nevertheless, TBE programs are the most widely used approach to bilingual education in the U.S. and in CPS (Ovando et al., 2003; Vargas, 2006.), and they may take one of two major forms:

1. Early-exit transitional. This model of TBE is the most common linguistic and academic program implemented to serve ELs in the U.S. (Baker, 2006), and CPS. The term early-exit is used because the goal is to transition ELs into English-only classrooms as early as possible—generally within two years (Baker, 2006). Generally, these TBE classrooms are self-contained, and require bilingual teachers to deliver instruction in the two languages (Baker, 2006).
2. Late-exit transitional. Often referred to as maintenance or developmental bilingual programs (Ovando et al., 2003). Generally, in these TBE programs ELs receive instruction in English and in their native language during the elementary school years, up to grade 6 (Ovando et al., 2003). Transition into an English-only classroom is expected in 5th or 6th grade (Ovando et al., 2003). Although late-exit transitional programs allow more time to develop the ELs’ native language, the final goal is still English monolingualism.

Unfortunately, TBE programs are often seen as subtractive models of teaching ELs (Ovando et al., 2003), because as Roberts (1995) depicts it, in subtractive programs “students lose their first language in the process of acquiring their second language” (p. 372). This loss in the ELs’ first language in order to acquire the second language has been associated with negative cognitive effects, difficulties succeeding in school, loss of cultural or ethnic identity, less positive self-concept, and even alienation or marginalization (Cummins, 2000; Baker, 2006). Despite of this, TBE programs continue to be popular because they are deemed as more cost effective than the more recommended, additive forms of bilingual education. However, Dutcher (1995) provides an important conclusion regarding the cost of bilingual education, which is that sound bilingual education practices save the education system money
because they provide higher levels of achievement in less time, and in the long-run they lower unemployment and provide a more skilled work force.

The theoretical framework that supports TBE include: (a) language acquisition theories such as Krashen’s Input Hypothesis that describe the need for ELs to receive comprehensible input to encourage language acquisition; (b) Krashen’s Acquisition/Learning Hypothesis, that describe the process of both acquiring and learning a second language; (c) Vygotsky’s Zone of Proximal Development, that asserts the teacher's most important classroom work is to provide the instruction and social interaction students need to move from what they know to what they don't yet know; and (d) bilingualism theories, such as Cummins' Developmental Interdependence Hypothesis, that claims that second language proficiency is dependent on the level of proficiency students achieve in their first language. However, due to issues with the way in which TBE programs have been implemented—where it has been mostly used to transition ELs to the mainstream classroom, and not to build bilingualism and biliteracy—TBE programs fall short of the requirements of bilingual theoretical perspectives. Therefore, it is best to understand them through pedagogical practices than theoretically.

Based on extensive research in the field, Lara-Alecio and Parker (1994) developed the Transitional Bilingual Pedagogical Model (TBPM). Figure 4 depicts this four-dimensional model for transitional bilingual classrooms that describes what bilingual classrooms should be like.
Figure 4. The four dimensions of the Transitional Bilingual Pedagogical Model

Lara-Alecio and Parker (1994) suggest that language content refers to teachers’ expectations of differences in second-language proficiency depending on the content area. Teachers should also expect to use varying levels of the EL’s native language for support. For instance, an EL may be at a level 1 in their English reading comprehension skills, but is at a level 3 in their English listening comprehension skills. Hence, the student will require more use of the native language when instructing on reading comprehension skills than during listening instruction. Language of instruction refers to instructional time distribution given to each language; it stipulates when each language should be used to maximize on the EL’s English language and content knowledge development. Communication mode allows teachers to acknowledge that language modalities (especially reading, writing, and speaking) can act reciprocally and should be
integrated within a lesson. “Their differentiation within our model, however, is to indicate that English facility may vary greatly by mode, and that each mode should be permitted to progress at the fastest rate possible” (Lara-Alecio & Parker, 1994, p. 124). Finally, activity structures allow TBE teachers to create a framework to plan steady, repeated periods of activity with purposeful communication objectives.

Research on Dual Language and Transitional Bilingual Programs

In the realm of 21st-century education, it is common to hear that the goal is to ensure that all students, including English learners (ELs), become college- or career-ready. However, the history of bilingual education empirical research makes indiscernible mention of the concept of readiness; instead the focus is on first and second language literacy skills of ELs at the K-6 level. In terms of first and second language literacy skills, research has continuously failed to exhibit a significant relationship between the amount of English instruction and the development of grade-level English proficiency (Cummins, 2000). Thomas and Collier (2002) have found that if some bilingual education programs have been unsuccessful, it is not due to the instructional time spent in the EL’s first language, but due to poor implementation. Yet, most empirical bilingual studies focus on program outcomes rather than program implementation; and a review of various studies of dual language education (DLE) programs and transitional bilingual education (TBE) programs support Cummins’ (2000) claim on the lack
of significant relationship between the amount of language of instruction and English proficiency.

There are a limited number of recent quantitative studies that compare DLE and TBE program outcomes. A small longitudinal study conducted by Montes (2005) compared the effectiveness of a DLE program and a TBE program in Texas, and supports Cummins’ claim of the lack of significant relationship between the amount of English instruction and the level of English proficiency. Although this study only looked at the performance of 22 students from each program, the data were compiled for a period of four consecutive years, from K-3. One of the purposes of this quantitative comparative study was to identify differences in the language development and the academic achievement among students participating in the DLE and TBE programs based on the 2001-2005 results of the Language Assessment Scales (LAS), the Texas English Language Proficiency Assessment System (TELPAS), the Tejas Lee or Texas Primary Reading Inventory, and the Texas Assessment of Knowledge and Skills (TAKS) reading scores (Montes, 2005). Montes (2005) found that in terms of differences in English language proficiency between the two groups, English LAS scores indicated that ELs in the DLE program outscored ELs in the TBE program at every grade level; however, ELs in the TBE program made more growth from kindergarten to 2nd grade. The exact same trend was seen between the groups in Spanish language proficiency as measured by the Spanish LAS. Their English language proficiency measured by the TELPAS, indicated a higher
number of ELs in the TBE program scoring in the advanced and advanced high
category than ELs in DLE; however, the difference was not statistically significant
(Montes, 2005). As for the results on the Tejas Lee/Texas Primary Reading
Inventory, he concluded that the DLE program offered more opportunities for ELs
to improve on their language and reading skills. Finally, the difference in the
achievement scores on the TAKS showed noticeable differences favoring ELs in
the DLE program: 59% of the ELs in the DLE program scored 15% or above the
state standard, while in the TBE group only 23% of the ELs scored 15% above
state standard. Due to the fact that most of the differences were not highly
significant, Montes concluded that both programs showed positive growth in both
languages for English learners.

Similarly, Fralick (2007) was not able to find a significant difference in the
performance of ELs in different programs. She compared the English reading
achievement, as measured by the TAKS in 2006, of fourth grade ELs after they
consistently participated in English-only instruction, DLE or TBE programs from
kindergarten to 3rd grade. Fralick (2007) utilized a causal-comparative design
analyzing the scores of 1,100 ELs that attended 14 public schools in Texas of
similar socioeconomic background. She found that students who consistently
attended one program attained similar levels of academic achievement
regardless of the program type (Fralick, 2007). On the other hand, Trejo (2015),
who also analyzed the TAKS reading scores, found that ELs and English-
proficient students in English-only, DLE and TBE programs showed significant
differences in their performance. Her research indicates that: (a) native English speakers in the DLE programs had statistically significantly higher reading TAKS scores than the native English speakers in the English-only program; (b) the reading TAKS scores of native Spanish speakers (the ELs) in the DLE program did not differ from the scores of native English speakers in the English-only program; (c) the reading TAKS scores of native English speakers in the DLE program were statistically higher than the scores of native Spanish speakers in the DLE program; and (d) there was not a statistically significant difference between the reading TAKS scores of native Spanish speakers in DLE programs and native Spanish speakers in TBE programs (Trejo, 2015).

The achievement results of ELs studied by Fralick (2007) and Trejo (2015), differ from those found by Nascimento (2011), who used a distinct set of assessment measures to determine the achievement of ELs. In this archival quantitative study, Nascimento (2011) was interested in determining the difference in word decoding and reading comprehension achievement of 23 ELs who were continuously enrolled in K-3 DLE and TBE programs in the Newark Public Schools district in New Jersey. One-tailed, two-sample t-tests were used to determine differences in scores. In terms of word decoding, as measured by the Yopp-Singer Test of Phonemic Awareness, there was not a statistically significant difference in the scores for the students enrolled in the DLE program and those in the TBE program. Word decoding, measured by the Ohio Word Test, indicated that kindergarten TBE students scored higher than those in DLE,
but not statistically significant; however, first grade DLE students scored statistically higher than their TBE peers. On the Slosson Oral Reading Word Test, students in third grade DLE programs scored statistically higher than their TBE peers; and a letter identification test revealed that students in first and second grades in the DLE program scored significantly higher than the students in the TBE program. As for the students' performance in reading comprehension, their performance on the Developmental Reading Assessment indicated that ELs in DLE grades 1, 2 and 3 scored significantly higher than their TBE peers. On the New Jersey Assessment of Skills and Knowledge, there was no difference between the two groups. Finally, as measured by the Assessing Comprehension and Communication in English State to State for English Language Learners (ACCESS for ELLs), the reading comprehension scores of ELs in DLE grades 1, 2, and 3 scored significantly higher than their TBE peers. Nascimento (2011) concluded that K-3 ELs who were continuously enrolled in a DLE program revealed higher academic achievement than the ELs in TBE program.

Ferron (2011) also found positive results for students enrolled in DLE programs, but he analyzed students in more than just K-3 grade levels. Ferron (2011) aimed to determine the long-term K-12 academic achievement of Hispanic students that attended DLE programs compared with the academic achievement of comparable students that were enrolled in the mainstream, TBE/ESL programs. To achieve this goal, he conducted a quantitative retrospective research, comparing the performance of students in the three
programs in schools located along the Texas-Mexico border. The students were divided analyzed by cohorts, 2005-2009 and 2006-2010, which meant that each participants’ data was collected from 9th to 12th grade. The participants’ educational achievement was determined based on their performance on the Texas Assessment of Knowledge and Skills (TAKS), participation in AP courses, individual results in SAT and ACT, percentage of students graduating from high school, and percentage of high school graduates enrolled in college the fall after graduation (Ferron, 2011). The results indicated that students enrolled in the DLE program outperformed their non-DLE peers in most of the indicators (Ferron, 2011). Specifically, the Native-English speakers in DLE programs had the best results in the 80 measures of academic performance analyzed (40 indicators in two cohorts), placing first 72 times, placing second seven times, and placing last once (Ferron, 2011). Native-Spanish speakers in DLE programs were the second best performing group, followed by mainstream students, and then finally TBE/ESL students performed the lowest. The results of the Native-Spanish speakers in DLE programs and the TBE/ESL program participants are particularly important because these are the participants than were all considered English learners (ELs). As for these two groups, Ferron (2011) found that the academic performance of Native-Spanish speakers in DLE programs surpassed the academic performance of Native-Spanish speakers enrolled in TBE/ESL in all 80 measures of academic achievement. Generally, the differences between Native-Spanish speakers in DLE programs and those in TBE/ESL programs were
statistically significant and consistent across cohorts. Also, he found that the
differences were larger in college readiness and high school performance
indicators than in the indicators related to TAKS. Ferron (2011) concluded that by
participating in DLE programs Hispanic Native-Spanish speakers are getting
better results on standardized assessments, as well as are moving on from
secondary school at higher rates, graduating as distinguished at higher rates,
participating more, and are all performing more effectively in higher education
courses and assessments, expanding their grade point averages, and
consequently setting themselves in better positions, and in the end performing
better than their peers that participated in TBE/ESL programs.

A recent study conducted by Jonathan, Kim and Franklin (2012) did not
find that DLE and TBE programs produced significantly notable results. Their
longitudinal study analyzed ELs’ reading comprehension and oral language
development in both English and Spanish, in K-3 for three instructional groups:
TBE, DLE, and Sheltered-English immersion (SEI). Jonathan et al. (2012) found
that the English decoding and phonological skills measures between the ELs in
the three programs were generally small to moderate (Jonathan, Kim & Franklin,
2012). In contrast, ELs in the SEI program showed moderate to large advantages
over the ELs in the TBE and DLE programs on the majority of the English oral
language and reading comprehension measures (Jonathan, Kim & Franklin,
2012); but they noted that the average score among all three groups were well
below the national norms for the English and Spanish oral language measures throughout the course of the study (Jonathan, Kim & Franklin, 2012).

Overall, recent studies show that ELs in TBE programs are either performing comparable to those in DLE programs, or are being significantly outperformed by DLE program participants. However, it is important to note that the amount of time ELs spend in DLE programs is key. Lindholm-Leary (2005) suggested that DLE programs lead to higher student outcomes when they are offered for at least six years. This is the average number of years needed to reach grade-level achievement and native-like English proficiency based on a number of language acquisition program studies (Collier & Thomas, 2004; Lindholm-Leary 2005).

Summary

During the 2014-2015 school year, 33% of the English learners in Illinois were enrolled in the Chicago Public Schools, and it is predicted that this number will quadruple by 2025. Unfortunately, from 2010-2014, the reading achievement gaps between of English learners and their English-proficient peers in grades 4 and 8 in the Chicago Public Schools has not changed significantly. Therefore, in order to address the question of what is the best approach to teach English to English learners, it is important that educators look at that the available research has to say.

A closer look at dual language education and transitional bilingual education research studies suggest that dual language education programs are
an effective way to address the linguistic and academic needs of English learners. There are also notable documented achievements of English learners in transitional bilingual education programs at the elementary level; however, several recent studies have not found significant differences between the achievement of English learners in dual language education and transitional bilingual education programs.
CHAPTER THREE: METHODOLOGY

Introduction

The purpose of this archival comparative study was to compare the reading achievement of third grade English learners (ELs) enrolled in dual language education (DLE) programs and those enrolled in transitional bilingual education (TBE) programs in order to gain information to ascertain which program might be more effective in improving the English reading proficiency of third grade ELs as indicated by their performance on the Illinois State Achievement Test (ISAT) and Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs). For the purpose of this study ELs are defined as “linguistically and culturally diverse students who have been identified (by a WIDA screener and other placement criteria) as having levels of English language proficiency that require language support to achieve grade-level content in English” (WIDA, 2012).

This chapter centers on the study’s research design, setting, participants, instrumentation, procedures, data analysis, limitations and delimitation—all of which will aid an experienced researcher in replicating this study.

Research Design

This research focused on comparing the reading achievement of third grade English learners (ELs) enrolled in the Chicago Public Schools (CPS) dual language education (DLE) programs to those enrolled in transitional bilingual education (TBE) programs to determine which program was associated with
higher reading proficiency of third grade ELs in this sample. The archival comparative design used was most appropriate because of the nonexperimental and comparative nature and of this study. Nonexperimental, because of the use of archival (pre-existing) data, and comparative because two groups were compared based on one measured variable (Mertle, 2015). However, it is important to clarify that a comparative design does not establish a cause-and-effect relationship.

This study utilized archival test data from 2010 to 2014: the ELs’ reading test scores and their reading performance levels. The independent variables in this study were the instructional programs, DLE and TBE. The dependent variables are the ELs' reading scores on ISAT and reading proficiency levels on ACCESS for ELLs. ISAT and ACCESS for ELLs were an appropriate measure of reading proficiency, because they are both standardized tests.

This study utilized an independent sample comparison of third grade ELs from two DLE programs and two TBE programs. These program samples were selected because several studies indicated that ELs in DLE programs outperformed their peers in TBE programs (Gomez et al., 2005; Lindholm-Leary, 2005; Thomas & Collier, 2004). Third grade was selected because: (a) Illinois state-wide accountability testing begins at the third-grade level; (b) this was the grade level with the largest EL sample size; and (c) there is a shortage of research comparing DLE and TBE programs at the third-grade level. Reading proficiency was selected as the focus because ELs reading scores were
consistently the lowest among the subjects reported in several studies (Collier & Thomas, 2002; Howard et al., 2004), and because reading is an area of focus across bilingual education research.

A comparison of reading performance of ELs in third grade was made using 2010-2014 student data from ISAT and ACCESS for ELLs of third grade ELs that participated in a total of four Chicago public schools, listed in Table 1 on page 62. Each program was given a pseudonym to protect the privacy of the ELs. The two DLE programs were named DLE1 and DLE2; and the two TBE programs were names TBE1 and TBE2.

The predictive hypotheses are:

Hypothesis 1: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in third grade dual language education programs compared to those enrolled in third grade transitional bilingual education programs.

Hypothesis 2: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in DLE1 compared to those enrolled in TBE1.

Hypothesis 3: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in DLE2 compared to those enrolled in TBE2.

Hypothesis 4: There is a significantly higher mean score in the reading proficiency levels on the ACCESS for ELLs for third grade English learners.
enrolled in dual language education programs compared to those enrolled in third grade transitional bilingual education programs.

Hypothesis 5: There is a significantly higher mean score in the reading proficiency levels on the ACCESS for ELLs for English learners enrolled in DLE1 compared to those enrolled in TBE1.

Hypothesis 6: There is a significantly higher mean score in the reading proficiency levels on the ACCESS for ELLs for English learners enrolled in DLE2 compared to those enrolled in TBE2.

The analyses of the variables in this study were done using independent sample t-tests. In order to determine whether to reject or fail to reject the null hypotheses, a 5% chance threshold for confidence was utilized “because scientists tend to believe that… only when there is a 5% chance (or .05 probability) of getting the data we have if no effect exists are we confident enough to accept that the effect is genuine” (Field, 2013, p. 61).

Once the hypotheses were tested, additional analyses were done using t-tests in order to determine if there was a statistically significant difference between the ISAT and ACCESS for ELLs scores of third grade ELs in DLE1 and DLE2. The reading scores of third grade ELs in TBE1 and TBE2 were also compared using t-tests. A 5% threshold for confidence was also utilized for the additional analyses. The need for these additional analyses emerged because the six hypotheses tested, and their results, encouraged the researcher to inquire
further about how similar programs compared to one another (DLE1 vs. DLE2 and TBE1 vs. TBE2).

**Setting and Participants**

The participants in this study were third grade English learners (ELs) enrolled in the Chicago Public Schools (CPS) from 2010-2014. This district was selected for the study because it is the third largest school district in the U.S. (Illinois State Board of Education, 2015), its demographic trends mimic the trends seen nationwide, and it is the district with the largest population of ELs in Illinois.

In order to narrow the list of participants within the CPS, criterion sampling was utilized for this study. Criterion sampling involves choosing cases that satisfy an important criterion (Teddlie & Yu, 2007). This strategy is useful when conducting studies on educational programs, because the researcher can choose specific cases to study and use certain criteria.

The participating Chicago public schools were selected after a review of 15 schools listed as providing DLE programs. Of those 15, only two DLE schools met the following criteria:

- The DLE program was offered in grades K-3 between 2010 and 2014. This information was provided via electronic mail by the CPS Office of Language and Cultural Education.

- The school containing the DLE program was identified by the CPS as being a level 1+ or level 1 school, according to their School Quality Rating Policy (SQRP). The SQRP is CPS’s policy for evaluating the
yearly performance of every school based on indicators such as student academic attainment on specific tests, student attendance, growth of ELs, and school surveys (see Appendix B). Schools are then rated and assigned a level: 1+, 1, 2+, 2 or 3—with level 1+ being the highest level. Selecting only level 1+ and level 1 schools ensured that only higher performing schools were selected—schools that met or exceeded the district’s minimum performance standards.

With those two DLE schools selected, it was then necessary to select the same number of Chicago public schools that offered TBE programs. In order to generate a sample of TBE programs that was comparable to the sample of DLE programs, it was ideal to select schools that met the following criteria: (a) schools that had similar demographics; (b) were located in similar neighborhoods; (c) were rated level 1 or level 1+; and (d) offered a TBE program that was active during 2010-2014 for grades K-3. Table 1 displays information about the four participating schools.

Table 1
Chicago Public Schools Used in the Study

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Program Model</th>
<th>School Type</th>
<th>SQRP</th>
<th>% of ELs</th>
<th>% Low Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLE1</td>
<td>DLE 90/10</td>
<td>Neighborhood/Magnet</td>
<td>Level 1</td>
<td>52.8%</td>
<td>99.1%</td>
</tr>
<tr>
<td>DLE2</td>
<td>DLE 50/50</td>
<td>Magnet</td>
<td>Level 1+</td>
<td>29.8%</td>
<td>58.7%</td>
</tr>
<tr>
<td>TBE1</td>
<td>TBE</td>
<td>Neighborhood</td>
<td>Level 1</td>
<td>36.8%</td>
<td>98.0%</td>
</tr>
<tr>
<td>TBE2</td>
<td>TBE</td>
<td>Magnet</td>
<td>Level 1+</td>
<td>10.6%</td>
<td>65.8%</td>
</tr>
</tbody>
</table>

Instrumentation

During the 2010 to 2014 school years, Illinois state law required English learners (ELs) with more than one year in a language acquisition program to participate in the Illinois Standards Achievement Test (ISAT), and required every EL to participate in the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs).

ISAT

The ISAT was a standardized test utilized in Illinois from 2006 to 2014 to measure student achievement in relation to the Illinois Learning Standards in reading, mathematics, science, and writing for students in grades 3-8 (Illinois State Board of Education, 2011 & 2014b); however, the writing portion was eliminated after 2011 due to state funding deficiencies, and the science portion was only delivered to students in grades 4 and 7. Although the majority of the test only required students to answer multiple choice questions, the mathematics and reading portions also contained open-ended questions that required students to draft a written response.

Student achievement on the ISAT was reported as scale scores. In order to better understand what students’ scale scores represented, ISAT creators placed the scale scores in reading, mathematics, and science in one of four performance categories:

Exceeds Standards: Student work demonstrates advanced knowledge and skills in the subject. Students creatively apply knowledge and skills to solve problems and evaluate the results.
Meets Standards: Student work demonstrates proficient knowledge and skills in the subject. Students effectively apply knowledge and skills to solve problems.

Below Standards: Student work demonstrates basic knowledge and skills in the subject. However, because of gaps in learning, students apply knowledge and skills in limited ways.

Academic Warning: Student work demonstrates limited knowledge and skills in the subject. Because of major gaps in learning, students apply knowledge and skills ineffectively. (Illinois State Board of Education, 2014b, p. 1)

The reading test, the specific portion of ISAT utilized in this study, included one extended-response item which made up 10% of the student’s score in reading; this was combined with the multiple-choice questions in order to produce a single overall ISAT reading scale score. ISAT scoring took into account the yearly variations of the difficulty levels of the items; therefore, the number of correct answers needed to meet or exceed would vary across the years (Illinois State Board of Education, 2014). Reading proficiency was defined by the student’s performance as measured by the Illinois Learning Standards and qualified by the following performance levels: academic warning, below standards, meet standards, and exceeds standards (Illinois State Board of Education, 2014b).

Overall, the reliability of the reading ISAT was high for general education students that were not part of specific academic programs such as a language acquisition program. The reliability of a test reflects the degree to which test scores are free from errors of measurement that arise from various sources.
(Illinois State Board of Education, 2014). It indicates the degree to which real life differences in the construct being measured are reflected on differences in the test scores (Illinois State Board of Education, 2014b). According to the Illinois State Board of Education (2014b), most well-constructed achievement tests have consistency values (alpha coefficient) above .90; however, the ISAT technical manuals indicate that the reliability estimates (alpha coefficient values) for ELs that took the reading ISAT from 2010 to 2013 was .88, and .87 in 2014 (Illinois State Board of Education, 2010; 2011; 2012; 2013b; & 2014b).

**ACCESS for ELLs**

The ACCESS for ELLs was an English language proficiency assessment given to ELs in Kindergarten through 12th grade (WIDA, 2015). It was administered annually in WIDA Consortium member states, such as Illinois, in order to monitor student progress in acquiring academic English. In Illinois it was used exclusively to measure ELs’ English proficiency on a yearly basis from 2006 to 2015 (Illinois State Board of Education, 2015). Within the 3-5 grade cluster, the ACCESS for ELLs consisted of three test types (called forms): Tier A (beginning), Tier B (intermediate), and Tier C (advanced). Each form was more appropriately targeted for students’ range of language skills (WIDA, 2015). This test evaluated the language areas of listening, speaking, reading, and writing (WIDA, 2015). In the domain of reading, for instance, the ACCESS for ELLs used multiple choice questions to evaluate reading comprehension.
The ACCESS for ELLs served two purposes: (a) to assess the English language development of ELs in Grades K–12 in relationship to the WIDA 2012 Amplification of the English Language Development Standards, and (b) to accurately place ELs into proficiency levels described by the English language development standards (Illinois State Board of Education, 2015). Results on the ACCESS for ELLs are used by participating states, such as Illinois, in order to monitor the progress of ELs, make decisions about exiting students from language acquisition programs, and for accountability purposes (Illinois State Board of Education, 2015).

A student’s results on the ACCESS for ELLs was reported in three ways: raw scores, scale scores, and English language proficiency (ELP) levels (WIDA, 2015). Raw scores were converted to scale scores, but should be used with caution. For a true interpretation of students’ performance, the scale scores can be used with confidence. According to WIDA (2015), scale scores reported raw scores consistently in order to eliminate differences in item difficulty between test administrations. They also allowed for the comparison of scores across periods of time and between different students on a single vertical scale from kindergarten to 12th grade.

On the other hand, the proficiency level scores are interpretive scores that provided an interpretation of the scale scores in terms of the six WIDA Language Proficiency Levels; 1-Entering, 2-Emerging, 3-Developing, 4-Expanding, 5-Bridging, and 6-Reaching (WIDA, 2015). Reading proficiency level scores, which
will be used in this study, are presented as whole numbers that indicate the student’s reading proficiency level as based on the WIDA Standards, followed by a decimal that shows the proportion within the proficiency level range (WIDA, 2015). For instance, a student at reading proficiency level 3.5 has a scale score that falls in between the cut points for level 3 and for level 4.

As for the reliability of the ACCESS for ELLs, the annual technical reports of tests delivered from 2010 to 2012 only describe the test’s reliability for the overall composite proficiency score—which is the score that summarizes students’ performance in the four domains: listening, speaking, reading and writing (WIDA, 2010; 2011; & 2012b). On average, the reliability of the composite proficiency scores of third grade ELs that took the test from 2010 to 2012 was above .90 (WIDA, 2010; 2011; & 2012b). However, the latest report published, describes the test’s reliability not only for composite proficiency score, but also for the four domains. The reliability of the composite proficiency scores of ELs that took the grade 3-5 test was .931; however, the weighted reliability of the reading portion of the test was only .782 (WIDA, 2013). Table 2 on the following page displays a clearer breakdown of that weighted coefficient.
Table 2

ACCESS for ELLs Reading 3-5 Reliability

<table>
<thead>
<tr>
<th>Tiers</th>
<th>No. of Students</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>26,270</td>
<td>0.841</td>
</tr>
<tr>
<td>B</td>
<td>140,984</td>
<td>0.802</td>
</tr>
<tr>
<td>C</td>
<td>156,242</td>
<td>0.753</td>
</tr>
</tbody>
</table>

Source: WIDA (2013)

Procedure

In order to obtain the student assessment data necessary to conduct this study, a Freedom of Information Act request was submitted to the Illinois State Board of Education (ISBE) in January 2016. This was done after three failed attempts to gather the data directly from the Chicago Public Schools (CPS). The request for data submitted to ISBE was written in such a way as to collect individual ISAT reading scores for ELs who were enrolled in the DLE and TBE programs as third graders during the years 2010-2014, and to collect individual ACCESS for ELLs reading proficiency levels for ELs who were enrolled in the DLE and TBE programs as third graders during the years 2010-2014.

The ISAT reading data were requested to include the scale scores of each EL, and the ACCESS for ELLs reading proficiency levels was requested to include individual student scores. The data collected were placed on an Excel spreadsheet and converted to Statistical Package for the Social Sciences (SPSS) in order to conduct the data processing and analysis.
Data Analysis

This quantitative comparative study included 1,002 scores of third grade English learners (ELs) on the reading Illinois State Assessment Test (ISAT) from 2010-2014, and 1,105 reading proficiency levels of third grade ELs who participated in the reading portion of the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) from 2010-2014. The scores of the participants were analyzed by using independent samples t-tests to determine significant differences between the performance of ELs by program type and by similar pairs using a 5% chance ($P \leq 0.05$) threshold for confidence.

The data were analyzed separately, by hypothesis. Hypotheses 1 and 4 compared the two DLE programs (DLE1 and DLE2) to the two TBE programs (TBE1 and TBE2); using the following comparisons:

- Hypothesis 1: ISAT reading scaled scores of 3rd grade DLE vs. 3rd grade TBE
- Hypothesis 4: ACCESS for ELLs reading proficiency scores of 3rd grade DLE vs. 3rd grade TBE.

Hypotheses 2, 3, 5, and 6 compared a specific DLE program to a similar TBE program based on the five criteria utilized in the participant selection process: (1) the programs had to be offered from K-3 during the 2010-2014; (2) the schools must have received a CPS rating of level 1 or level 1+; (3) the schools must be located in the similar neighborhoods; (4) the schools must be
the same types; and (5) student demographics must be similar. These criteria produced similar pairs that were analyzed in the following manner:

- Hypothesis 2: ISAT reading scale scores of DLE1 vs. TBE1
- Hypothesis 3: ISAT reading scale scores of DLE2 vs. TBE2
- Hypothesis 5: ACCESS for ELLs reading proficiency scores of DLE1 vs. TBE1
- Hypothesis 6: ACCESS for ELLs reading proficiency scores of DLE2 vs. TBE2

The following additional analyses were conducted using t-tests and a 5% threshold for confidence, due to questions that emerged after testing the hypotheses above:

- ISAT reading scale scores of DLE1 vs. DLE2
- ISAT reading scale scores of TBE1 vs. TBE2
- ACCESS for ELLs reading proficiency scores of DLE1 vs. DLE2
- ACCESS for ELLs reading proficiency scores of TBE1 vs TBE2

**Limitations and Delimitations**

The first limitation is that only the reading achievement scores of ELs in two program types were compared: DLE and TBE; other bilingual education programs were not included in this analysis. In addition, the small number of DLE and TBE programs in this study posed a limitation.

A second limitation is that specific instructional components, such as the amount of instructional time spent in English or the students’ first language, for
each DLE and TBE program will not be determined. The data that were collected did not indicate whether all sample participants were enrolled in either a DLE or TBE program upon entry into the school district, or if the participants were enrolled continuously from kindergarten to third grade.

A third limitation is that data from only the Chicago Public Schools (CPS) were collected. This may limit the generalizations to students who attend other schools in CPS and to other districts in Illinois that are comparable in demographics and have implemented DLE and TBE programs.

Other limitations include that the confounding variables of teacher qualifications and experience (or lack thereof), quality of instruction, professional development, living arrangements of participants, parental involvement, among others, were not taken into account.

This study was delimited to ELs chosen based on the following criteria: enrolled in Chicago Public Schools from 2010-2014, third grade students, and in DLE programs and TBE programs that have similar demographics and are located in similar neighborhoods.

**Summary**

This archival quantitative study compared the reading achievement of third grade English learners enrolled in dual language education programs and those enrolled in transitional bilingual education programs in order to ascertain which program is more effective in improving the reading proficiency of English learners as indicated by their performance on the Illinois State Achievement Test and
Assessing Comprehension and Communication in English State-to-Sate for English Language Learners. The study utilized a comparative design in order to study conditions that are pre-existing and attempted to determine if the groups—English learners in two dual language education programs and English learners in two transitional bilingual education programs—performed differently on the same reading assessments. Participants’ scores were analyzed by using independent samples t-tests to determine significant differences between the performance of ELs. The findings from the statistical analyses are presented in Chapter Four.
CHAPTER FOUR: ANALYSIS OF DATA

Introduction

This archival comparative study addresses which of two programs might be more effective in countering the problem of the underperformance of third grade English learners (ELs) in the Chicago Public Schools (CPS) by comparing the reading achievement of ELs enrolled in dual language education (DLE) programs to those in transitional bilingual education (TBE) programs.

The test data analyzed were for the academic years 2010-2014, for both the Illinois State Achievement Test (ISAT) and Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs). The test data were collected separately based on the research questions; therefore, both scores were not matched for individual students. There was a total of 434 DLE participants’ ISAT scores and 568 TBE participants’ ISAT scores, and a total of 469 DLE participants’ ACCESS for ELLs scores and 636 TBE participants’ ACCESS for ELLs scores.

This chapter provides a description of the sample and the results of the statistical analyses presented through tables, and they are grouped by the two research questions:

Research Question 1: Is there a significant difference in the reading scores of English learners on the Illinois Standards Achievement Test between those enrolled in third grade dual language education programs and those enrolled in third grade transitional bilingual education programs?
Research Question 2: Is there a significant difference in the reading proficiency levels of English learners on the ACCESS for ELLs between those enrolled in third grade dual language education programs and those enrolled in third grade transitional bilingual education programs?

Description of the Sample

In order to carry out this quantitative comparison of the reading performance of two groups—English learners in dual language programs and English learners in transitional bilingual education programs—it was important to select schools that were as similar as possible based on the grades levels in which the programs were offered, the rating the schools received from the district, school type, demographics, and location. A detail description of the sample based on the selection criteria used in the study is depicted below to help understand the make-up of the participants.

DLE1 and TBE1

DLE1 and TBE1 were selected as similar pairs because they are both Chicago public schools located in the Gage Park neighborhood (1.2 miles apart), which increases the likelihood that the students enrolled in both schools have similar characteristics (see Table 3). Both are rated as Level 1 schools, which means that they are considered high performing schools that have met or exceeded the district’s minimum performance standards.
Table 3

*School Characteristics of DL1 and TBE1*

<table>
<thead>
<tr>
<th></th>
<th>DLE1</th>
<th>TBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilingual Program</td>
<td>DLE 90/10</td>
<td>TBE</td>
</tr>
<tr>
<td>Grades</td>
<td>PK-8</td>
<td>K-8</td>
</tr>
<tr>
<td>School Type</td>
<td>Neighborhood/Magnet</td>
<td>Neighborhood</td>
</tr>
<tr>
<td>SQRP</td>
<td>Level 1</td>
<td>Level 1</td>
</tr>
<tr>
<td>% of ELs</td>
<td>52.80%</td>
<td>36.8%</td>
</tr>
<tr>
<td>% Low Income</td>
<td>99.10%</td>
<td>98.0%</td>
</tr>
<tr>
<td>White</td>
<td>0.10%</td>
<td>1.30%</td>
</tr>
<tr>
<td>Black</td>
<td>3.40%</td>
<td>0.60%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>95.70%</td>
<td>97.60%</td>
</tr>
<tr>
<td>Asian</td>
<td>0.0%</td>
<td>0.00%</td>
</tr>
<tr>
<td>American Indian</td>
<td>0.40%</td>
<td>0.30%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>0.30%</td>
<td>0.20%</td>
</tr>
<tr>
<td>Pacific islander</td>
<td>0.0%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>


Although both are neighborhood schools, DLE1 also has a magnet program embedded—which is the way they maintain the language balance of the students participating in the dual language program. The dual language program is open to every student in the assigned neighborhoods; however, through the lottery-system offered by the magnet program, DLE1 is able to enroll an almost equal number of English-dominant and Spanish-dominant students which is a best-practice recommended by DLE research. Priority is given to neighborhood students to enroll in the DLE program; however, not every English learner in DLE1 is enrolled in the DLE program. The percentage of ELs that participate in the DLE and TBE programs in DLE1 and TBE1 are unknown.

According to the Illinois State Report Card (2015), third grade English learners (ELs) in DLE1 had an average 37% ISAT reading achievement gap with their English-proficient peers who also attended DLE1 from 2010 to 2014. On the
other hand, third grade ELs in TBE1 had an average ISAT reading achievement gap of 45.6% with their English-proficient peers from 2010 to 2014. However, in 2014 the achievement gap between ELs and English-proficient students in DLE1 was 34% and in TBE1 it was 33%. These gaps are larger than the 2014 district-wide ISAT reading gap of 29% (the gap between all of the ELs and all of the English-proficient students in the school district).

**DLE2 and TBE2**

DLE2 and TBE2 were selected as similar pairs because they are both Chicago public schools located in adjacent neighborhoods—Wrigleyville and Buena Park (respectively, and are 1.2 miles apart). They are both rated as Level 1+ schools, which means that they are considered one of the highest performing schools and they have met or exceeded the district’s minimum performance standards. DLE2 and TBE2 are the nearest magnet schools in the area that have the same rating with comparable percentage of low income students; however, TBE2 has about a third of the number of ELs as DLE2 and they differ somewhat in their student ethnic composition (see Table 4 on the following page).

According to the Illinois State Report Card (2015), third grade English learners (ELs) in DLE2 has an average of 47% ISAT reading achievement gap with their English-proficient peers who also attend DLE2 from 2010 to 2014. Third grade ELs in TBE2 have an average ISAT reading achievement gap of 40% with their English-proficient peers from 2010 to 2014. In 2014 both DLE2 and TBE2 have a 42% EL to English-proficient reading achievement gap.
Table 4

School Characteristics of DLE2 and TBE2

<table>
<thead>
<tr>
<th></th>
<th>DLE2</th>
<th>TBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilingual Program</td>
<td>DLE 50/50</td>
<td>TBE</td>
</tr>
<tr>
<td>Grades</td>
<td>PK-8</td>
<td>PK-8</td>
</tr>
<tr>
<td>School Type</td>
<td>Magnet</td>
<td>Magnet</td>
</tr>
<tr>
<td>SQRP</td>
<td>Level 1+</td>
<td>Level 1+</td>
</tr>
<tr>
<td>% of ELs</td>
<td>29.80%</td>
<td>10.60%</td>
</tr>
<tr>
<td>% Low Income</td>
<td>58.70%</td>
<td>65.80%</td>
</tr>
<tr>
<td>White</td>
<td>10.10%</td>
<td>23.30%</td>
</tr>
<tr>
<td>Black</td>
<td>1.20%</td>
<td>39.00%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>84.50%</td>
<td>22.40%</td>
</tr>
<tr>
<td>Asian</td>
<td>1.10%</td>
<td>9.60%</td>
</tr>
<tr>
<td>American Indian</td>
<td>0.30%</td>
<td>0.80%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>2.80%</td>
<td>4.70%</td>
</tr>
<tr>
<td>Pacific islander</td>
<td>0%</td>
<td>0.20%</td>
</tr>
</tbody>
</table>


These gaps are larger than the 2014 district-wide ISAT reading gap of 29% (the gap between all of the ELs and all of the English-proficient students in the school district). Nevertheless, third grade ELs in TBE2 have, on average, performed 22.8% better in the ISAT reading compared to ELs in DLE2 from 2010 to 2014.

It is important to note that unlike DLE1, 100% of ELs in DLE2 participate in the DLE program. However, the percentage of ELs that participate in the TBE program at TBE2 is unknown.

Statement of the Results

In order to help provide a clearer picture of what types of language acquisition education programs work well to increase the reading proficiency of third grade students in the Chicago Public Schools, student reading test data underwent inferential statistical analyses to help determine the extent of the
difference between the two groups in this sample: dual language and transitional bilingual education programs. The results are presented by research question.

**Research Question 1: Comparison of ISAT Reading Scores**

The first research question asked about the difference between the reading scores of English learners on the Illinois Standards Achievement Test (ISAT) between those enrolled in third grade dual language education (DLE) programs and those enrolled in third grade transitional bilingual education (TBE) programs. Three independent sample t-tests were completed to compare the differences between the means of the two student groups by aggregating the scores of third grade English learners from 2010 to 2014. One comparison was made between the two program types as a whole, 3rd grade DLE vs. 3rd grade TBE, and two comparisons were made based on the pairs described in the previous section. Here are the five related hypotheses followed by the analyses results:

Hypothesis 1: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in third grade dual language education programs compared to those enrolled in third grade transitional bilingual education programs.

Table 5 (on the following page) shows the results for the two DLE programs and the two TBE programs from 2010 to 2014 (3rd grade DLE vs. 3rd grade TBE); it gives the results for Hypothesis 1 and also for the second and third hypotheses, discussed below. The results for Hypothesis 1 on the first line,
for the whole set of DLE programs and the TBE programs from 2010 to 2014 indicate that there is no statistical difference between the performance of ELs on the reading ISAT between the two programs \( (p = 0.089) \). Therefore, the null hypothesis cannot be rejected. However, the p-value borders on significance and is in the predicted direction; the difference is small \( (\text{Cohen’s } d = .11) \). This means that even though the ELs in the TBE programs obtained higher mean reading ISAT scores, overall, the difference was not great enough to have confidence it was not merely due to chance.

Table 5
*ISAT Difference between DLE and TBE Programs*

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>T</td>
</tr>
<tr>
<td>1</td>
<td>180.38</td>
<td>23.54</td>
<td>434</td>
<td>183.04</td>
<td>25.655</td>
<td>568</td>
<td>-1.702</td>
</tr>
<tr>
<td>2</td>
<td>180.89</td>
<td>23.905</td>
<td>356</td>
<td>180.84</td>
<td>25.583</td>
<td>474</td>
<td>0.028</td>
</tr>
<tr>
<td>3</td>
<td>178.06</td>
<td>21.793</td>
<td>78</td>
<td>194.12</td>
<td>23.139</td>
<td>94</td>
<td>-4.65*</td>
</tr>
</tbody>
</table>

* Significant at \( p<.05 \).

Hypothesis 2: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in DLE1 compared to those enrolled in TBE1.

The results for the DLE1 program and the TBE1 programs from 2010 to 2014, shown in the second line of Table 5, show that the p-value indicates that there is no statistical difference between DLE1 and TBE1 programs \( (p = .978) \). Therefore, the null hypothesis cannot be rejected. This means that the ELs in the
DLE1 and TBE1 programs did not obtain significantly different scores on the reading portion of the ISAT assessment.

Hypothesis 3: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in DLE2 compared to those enrolled in TBE2.

The results on Table 5 for the DLE2 program and the TBE2 program from 2010 to 2014 show a significantly higher performance for the TBE2 group. Based on the results of the t-test, a statistically significant difference was found between the means of the two groups (p < .001.), with a large effect size (Cohen’s d = .72.). Therefore, there is sufficient evidence to reject the null hypothesis, µ1 ≠ µ2. This means that the ELs in the TBE2 program obtained significantly higher scores on the reading portion of the ISAT assessment.

Research Question 2: Comparison of ACCESS for ELLs Reading Proficiency Levels

Answering the second research question involved analyzing the difference between the reading proficiency levels of English learners on a different test—the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs)—between those enrolled in third grade dual language education (DLE) programs and those enrolled in third grade transitional bilingual education (TBE) programs. An independent sample t-test was completed to compare the difference between the means of the two student groups by aggregating the scores of every third grade English learner tested from
2010 to 2014. Comparisons were made between the two program types as a whole, 3rd grade DLE vs. 3rd grade TBE, but also based on the pairs of schools described in the Description of the Sample. Here are the five related hypotheses and analyses results:

Hypothesis 4: There is a significantly higher mean score in the reading proficiency levels on the ACCESS for ELLs for third grade English learners enrolled in dual language education programs compared to those enrolled in third grade transitional bilingual education programs.

The first line of Table 6, on the following page, shows the results for the two DLE programs and the two TBE programs from 2010 to 2014. The mean reported shows a higher performance for the TBE group. Based on the results of the t-test, a highly statistically significant difference was found between the means of the two groups (p < .003). However, the effect size is small (Cohen’s d = .18). The groups achieved significant difference due to the large sample sizes. Therefore, there is sufficient evidence to reject the null hypothesis, \( \mu_1 \neq \mu_2 \). This means that the ELs in the four TBE programs obtained significantly higher reading proficiency levels on the ACCESS for ELLs assessment.

Hypothesis 5: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in DLE1 compared to those enrolled in TBE1.
Table 6
ACCESS for ELLs Difference between DLE and TBE Programs

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>n</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4.68</td>
<td>1.089</td>
<td>469</td>
<td>4.88</td>
<td>1.083</td>
<td>636</td>
<td>-3.009*</td>
</tr>
<tr>
<td>5</td>
<td>4.655</td>
<td>1.0963</td>
<td>385</td>
<td>4.801</td>
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<tr>
<td>6</td>
<td>4.818</td>
<td>1.0484</td>
<td>84</td>
<td>5.292</td>
<td>0.903</td>
<td>106</td>
<td>-3.35*</td>
</tr>
</tbody>
</table>

*Significant at p<.05.

As shown in the second line of Table 6, the results for the DLE1 and TBE1 from 2010 to 2014 show a statistically significant difference was found between the two groups ($p = .047$), with ELs in TBE1 scoring significantly higher. However, the effect size is small (Cohen’s $d = .13$), but similar to the performance of the whole set of programs (3rd DLE v. 3rd TBE). Therefore, there is sufficient evidence to reject the null hypothesis, $\mu_1 \neq \mu_2$. This means that the ELs in the TBE1 program obtained significantly higher reading proficiency levels on the ACCESS for ELLs assessment.

Hypothesis 6: There is a significantly higher mean score in the reading proficiency levels on the ACCESS for ELLs for English learners enrolled in DLE2 compared to those enrolled in TBE2.

The results for the DLE2 and TBE2 from 2010-2014 shows a higher performance for the TBE group ($p = .001$). There is a moderate-sized difference (Cohen’s $d = .48$), similar to the performance of the whole set of programs (3rd DLE v. 3rd TBE). Therefore, there is sufficient evidence to reject the null
hypothesis, $\mu_1 \neq \mu_2$. This means that the ELs in the TBE2 program obtained significantly higher reading proficiency levels on the ACCESS for ELLs assessment.

**Additional Research Questions**

Additional analyses were conducted in order to determine if the performance of third grade English learners (ELs) on the ISAT and ACCESS for ELLs were significantly different within each program type. This became important once the hypotheses were tested in order to determine if the differences found between the programs were due to the type of program (DLE or TBE) or the individual schools. The results of these analyses are reported by research question below.

Research Question 3: Is there a significant difference in the Illinois Standards Achievement Test reading scores of third grade English learners enrolled in different dual language education programs?

The analyses results for the Illinois Standards Achievement Test (ISAT) reading scores for the two dual language education programs from 2010-2014 show that, overall, there is no statistically significant difference between the two programs ($p = .337$) (see Table 7 on the following page).
Table 7
*ISAT Difference between DLE1 and DLE2*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLE1</td>
<td>180.89</td>
<td>23.905</td>
<td>356</td>
<td></td>
</tr>
<tr>
<td>DLE2</td>
<td>178.06</td>
<td>21.793</td>
<td>78</td>
<td>0.96</td>
</tr>
</tbody>
</table>

* Significant at p<.05.

Research Question 4: Is there a significant difference in the Illinois Standards Achievement Test reading scores of third grade English learners enrolled in different transitional bilingual education programs?

The analyses result for ISAT reading scores for the two transitional bilingual education programs from 2010-2014 show that ELs in both programs performed significantly different (p = .00) (see Table 8).

Table 8
*ISAT Difference between TBE1 and TBE2*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBE1</td>
<td>180.84</td>
<td>25.583</td>
<td>474</td>
<td></td>
</tr>
<tr>
<td>TBE2</td>
<td>194.12</td>
<td>23.139</td>
<td>94</td>
<td>-4.99*</td>
</tr>
</tbody>
</table>

* Significant at p<.05.

Research Question 5: Is there a significant difference in the ACCESS for ELLs reading proficiency levels of third grade English learners enrolled in different dual language education programs?
The analyses result for ACCESS for ELLs reading proficiency levels for the two DLE programs from 2010-2014 show that, overall, they are not significantly different ($p = .215$) (see Table 9).

Table 9

| ACCESS for ELLs Difference between DLE1 and DLE2 |
|-----------------|--------|-------|-----|
|                  | M      | SD    | N   | T    |
| DLE1             | 4.66   | 1.096 | 385 |      |
| DLE2             | 4.82   | 1.048 | 84  | -1.243 |

* Significant at $p<.05$.

Research Question 6: Is there a significant difference in the ACCESS for ELLs reading proficiency levels of third grade English learners enrolled in different transitional bilingual education programs?

The analyses result for ACCESS for ELLs reading proficiency levels for the two TBE programs from 2010-2014 show that, overall, they are significantly different ($p < .001$) (see Table 10).

Table 10

| ACCESS for ELLs Difference between TBE1 and TBE2 |
|-----------------|--------|-------|-----|
|                  | M      | SD    | N   | T    |
| TBE1             | 4.8    | 1.099 | 530 |      |
| TBE2             | 5.29   | 0.903 | 106 | -4.921* |

* Significant at $p<.001$. 

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Summary

The purpose of this research study was to compare the reading achievement of third grade English learners (ELs) enrolled in dual language education (DLE) programs with those enrolled in transitional bilingual education (TBE) programs in order to provide information about which program might be more effective in improving the reading proficiency of third grade ELs in Chicago Public Schools (CPS), as measured by the Illinois Standards Achievement Test (ISAT) and the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs). Statistical analyses were conducted in order to determine if the differences between the means were significant. When the ISAT scores of ELs in the two DLE and two TBE programs were compared the overall performance of ELs in both programs was not significantly different; however, the ACCESS for ELLs scores indicated that ELs in the TBE programs out-performed the ELs in the DLE programs (small and moderate-size differences).
CHAPTER FIVE: DISCUSSION AND RECOMMENDATIONS

Introduction

The purpose of this archival comparative study was to compare the reading achievement of third grade English learners (ELs) enrolled in dual language education (DLE) programs to those enrolled in transitional bilingual education (TBE) programs in order to ascertain which program might be more effective in improving the reading proficiency of third grade ELs as indicated by their performance on the Illinois State Achievement Test (ISAT) and Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs). Five years’ worth of archival student test data were collected for third grade ELs who participated in both programs in four Chicago public schools (two DLE and two TBE schools). Ultimately, the results of this study can provide guidance and assistance to school administrators and school district personnel as they evaluate and make decisions about programming options for ELs and program evaluations.

This chapter includes a summary of the study, discussions, limitations, implications, recommendations for future research, and conclusions.

Summary of the Study

The glaring reading achievement gap between English learners (ELs) and English-proficient students in the Chicago Public Schools (CPS) required the research on the reading proficiency of ELs in two popular language acquisition programs across the district—dual language education (DLE) and transitional
bilingual education (TBE) programs. Because the focus of this study was to identify which program is more effective, statistical analyses were conducted in order to determine if the differences between the mean reading scores of ELs in DLE programs compared to ELs in TBE programs were significant.

When the ISAT and ACCESS for ELLs reading scores of ELs in DLE and TBE programs were compared, the performance of ELs in both programs were, overall, not significantly different on the reading portion of the ISAT; however, the reading proficiency scores of ELs in the TBE programs on the ACCESS for ELLS were significantly higher than those of ELs in the DLE programs.

Discussion

A closer look at the research on language acquisition programs that are provided for English learners (ELs), such as dual language education (DLE) and transitional bilingual education (TBE), suggest that DLE programs are an effective way to address the linguistic needs of ELs (Lindholm-Leary, 2001; Thomas & Collier, 2002; Howard et al., 2004). There are also notable documented achievements of ELs in TBE programs at the elementary level (Baker, 2006; Gomez et al., 2005; Thomas & Collier, 2002). However, other studies have not found significant differences between the achievement of ELs in DLE and TBE programs (Fralick, 2007; Trejo, 2005; Montes, 2005; Jonathan, Kim & Franking, 2012).

Because of the conflicting information provided by researchers on the effectiveness of DLE and TBE programs, it is important for bilingual education
researchers to continue to add to the body of information utilizing varied student samples; especially in large urban school districts—like the Chicago Public Schools (CPS)—that will be impacted by the continued influx of ELs. For this reason, this study examined which of two programs is more effective in countering the problem of the underperformance of ELs in the CPS by comparing the reading achievement of ELs enrolled in DLE programs to those in TBE programs through the use of two research questions.

**Research Question 1: Comparison of ISAT Reading Scores**

Third grade is a critical year for many public schools across Illinois, because it is when students are first introduced to high-stakes assessments, such as the formerly administered Illinois Standards Achievement Test (ISAT). Therefore, it is important for educators, school administrators, and district administrators to know how students are performing at this grade level. With that in mind, the purpose of the first research question was to compare the third grade reading ISAT scores of English learners (ELs) enrolled in dual language education (DLE) programs to those enrolled in transitional bilingual education (TBE) programs. This research question was analyzed through the following three hypotheses:

Hypothesis 1: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in third grade dual language education programs compared to those enrolled in third grade transitional bilingual education programs.
Hypothesis 2: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in DLE1 compared to those enrolled in TBE1.

Hypothesis 3: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in DLE2 compared to those enrolled in TBE2.

The results of the t-tests conducted for hypotheses 1 and 2 indicated that, overall, ELs in third grade DLE and TBE programs performed the same on the reading ISAT—they did not obtain significantly different test scores (see Table 5 in Chapter Four). This finding is supported by Cummins’ (2000) Developmental Interdependence Hypothesis, which states that second language proficiency is dependent on the level of proficiency students achieve in their first language. At the third grade level, regardless of program type, ELs may be functioning at the first and second level of the Threshold Hypothesis—students need to reach certain levels of linguistic skills in their native language in order to support the transfer into the second language. (Cummins, 1976; Baker, 2006). As mentioned in Chapter Two, the complete benefits, as stated by the Threshold Hypothesis, are reached when students become bilingual—third threshold level (Cummins, 2000).

These results parallel those reported by Trejo (2015), who found that there was not a statistically significant difference between the reading TAKS scores of native Spanish speakers in DLE programs and native Spanish speakers in TBE
programs. Although the ISAT and TAKS are distinct tests, they are both criterion-referenced tests that require students to answer multiple-choice and extended response items, and they both have comparable reliability coefficients. Trejo (2015) reported the reliability for the TAKS test she analyzed to be between .81 and .93. The ISAT tests analyzed in this study have a reliability measure between .87 and .88. Since reliability is a manifestation of how well a test measures learning, it is appropriate to state that the ISAT and TAKS measure learning in similar, reliable ways—hence, the performance of students on one test can be compared to the performance of students on the other test.

On the other hand, the results of the t-test conducted for hypotheses 3 indicated that ELs in TBE2 obtained significantly higher scores on the reading portion of the ISAT assessment than ELs in DLE2 (see Table 5 in Chapter Four). This may be explained through the disproportionate amount of time each program dedicates to English language instruction. According to Martinez (2008), once ELs in TBE programs develop the minimum skills deemed necessary, the instruction in the first language is phased out, until all instruction is eventually conducted in English. In the case of TBE2, it is possible that many of the ELs in third grade were phased out from receiving support in their first language. This means that ELs in the TBE2 programs were receiving a larger amount of English language instruction than those in the DLE2; hence, the higher English reading scores.
Although most TBE programs provide ELs with instruction that is mostly in a separate setting and where interaction with proficient English speakers is limited or nonexistent (Ovando et al., 2003), if the ELs in TBE2 were phased out of first language support, they were most likely included in the general education classroom with English-proficient students. Therefore, taking into account the specific differences in student demographics between TBE2 and DLE2 noted on Table 4 in Chapter Four—TBE2 has a larger percentage of English-proficient students available for ELs to interact with which means that this finding may also be supported by the language acquisition theory proposed by Vygotsky—Zone of Proximal Development (ZPD) (Daniels, 1996).

The ZPD asserts the teacher’s most important classroom work is to provide the instruction and social interaction students need to move from what they know to what they do not yet know (Daniels, 1996). This social interaction, between ELs and their English-proficient peers produces authentic dialogue in the English language that is vital for ELs to acquire the language. When ELs have the opportunity to interact more with English-proficient students and teachers, then Krashen’s (1982) Input Hypothesis also becomes pertinent. The Input Hypothesis describes the need for ELs to receive comprehensible input to encourage language acquisition (Krashen, 1982). Therefore, ELs in the TBE2 program could have scored significantly higher than the DLE2 program because they were provided with more English-proficient students to interact with, which in turn allowed them to received more comprehensible input.
The fact that third grade ELs in DLE2 were significantly outperformed by ELs in TBE2 can also be supported by the studies conducted by Collier and Thomas (2004) and Lindholm-Leary (2005), which suggest that the amount of time that ELs spend in DLE programs is key. Lindholm-Leary (2005) suggested that DLE programs lead to higher student outcomes when they are provided for at least six years. At the third grade level in DLE2, ELs were only provided with a dual language education for four years. This falls below the average number of years required to reach native-like proficiency and grade-level achievement as confirmed by a number of evaluation studies on immersion and bilingual programs (Collier & Thomas, 2004; Lindholm-Leary 2005).

Although the result of hypothesis 3 is not supported by the research studies discussed in Chapter Two (Trejo, 2015; Jonathan et al., 2012; Ferron, 2011; Nascimento, 2011; Fralick, 2007; Montes, 2005), it makes sense that the greater emphasis on English proficiency alone offered by a level 1+ TBE program would lead to higher English reading achievement. TBE2 being a level 1+ school is considered to be a “nationally competitive school with the opportunity to share best practices with others” and “a school that has met or exceeded the district’s minimum performance standards” (See Appendix A). In addition, because TBE2 only has to focus on proficiency in one language; versus DLE2 which focuses on proficiency in English and Spanish; it makes sense that TBE2 is able to have a larger percentage of ELs outperforming the ELs in DLE2.
Research Question 2: Comparison of ACCESS for ELLs Reading Proficiency Levels

In the same way that third grade is the level where all students in Illinois are first introduced to high-stakes assessments, it is also an important grade because at this grade level many English learners (ELs) begin to exhibit a level of language competence that allows them to be considered English proficient—which means that they are transitioned out of language acquisition programs. Therefore, it is important for educators, school administrators, and district administrators to know how ELs are performing at this grade level. With that in mind, the second research question analyzed the difference between the reading proficiency levels of ELs on the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) between those enrolled in third grade dual language education (DLE) programs and those enrolled in third grade transitional bilingual education (TBE) programs. This research question was analyzed through the following three hypotheses:

Hypothesis 4: There is a significantly higher mean score in the reading proficiency levels on the ACCESS for ELLs for third grade English learners enrolled in dual language education programs compared to those enrolled in third grade transitional bilingual education programs.

Hypothesis 5: There is a significantly higher mean reading score on the Illinois Standards Achievement Test for English learners enrolled in DLE1 compared to those enrolled in TBE1.
Hypothesis 6: There is a significantly higher mean score in the reading proficiency levels on the ACCESS for ELLs for English learners enrolled in DLE2 compared to those enrolled in TBE2.

The result of the t-tests conducted for hypotheses 4, 5, and 6 indicated that ELs in TBE programs obtained significantly higher reading proficiency levels on the ACCESS for ELLs than ELs in DLE programs (see Table 6 in Chapter Four). This finding is different from the analysis of ACCESS for ELLs reading comprehension scores reported by Nascimento (2011)—who found that the ACCESS for ELLs reading comprehension scores of ELs in DLE grades 1, 2, and 3 were significantly higher than their TBE peers. However, Nascimento (2011) states that one of the limitations of his study was the issue of selection bias in the sample population used. In his study, he considered the possibility that parents who chose the DLE program have special characteristics, such as the tendency to be bilingual, which are likely to affect their children’s academic performance. There is a possibility that the ELs enrolled in the two DLE programs included in this analysis, did not have the influence of bilingual parents as noted by Nascimento.

Soltero (2004) and Howard et al. (2007) emphasized that DLE programs have the added responsibility of focusing on not just one but two languages of instruction. In the case of DLE1 and DLE2, this means that ELs are focusing on developing their reading skills in English and in their native language in order to become biliterate—which is something that ELs in TBE1 and TBE2 do not have
to do. These TBE programs are not focused on truly developing ELs’ native language reading skills, instead, instruction through the use of their native language is only delivered to provide content area support until ELs makes the transition into the target language—English (Martinez, 2008). This supports the findings because it explains the reason why ELs in the DLE programs did not score significantly higher than their peers in the TBE programs. ELs in DLE programs have the added task of learning to read in two languages, and reaching a high level of reading proficiency in two languages takes more than just four years.

The findings are also supported by the fact that TBE programs are set up so that ELs gain the tools necessary to quickly transition into an English-only classroom (Martinez, 2008). As mentioned previously, Collier and Thomas (2004) and Lindholm-Leary (2005) suggest that in order for DLE programs to produce higher student outcomes, they need to be provided for a minimum of six years. However, because TBE programs focus on quickly moving ELs out of language support, this could have an impact on their higher proficiency in reading in English. Ultimately, ELs in TBE programs receive more instruction in English than ELs in DLE programs.

Similar to the discussion of the findings of hypothesis 3, the findings of hypothesis 4, 5, and 6 can also be explained through Vygotsky’s ZPD (Daniels, 1996) and Krashen’s (1982) Input Hypothesis. Therefore, ELs in the TBE programs could have scored significantly higher on the ACCESS for ELLs than
those in the DLE programs because they had more English-proficient students to interact with, which in turn allowed them to receive more opportunities to receive comprehensible input.

**Limitations**

In this study, caution must be exercised in interpreting differences between the reading achievement of English learners (ELs) in dual language education (DLE) programs and transitional bilingual education (TBE) programs because there are several applicable limitations.

The first limitation is that the observed effects cannot be causally attributed to the DLE and TBE programs because the ELs were not randomly assigned to their instructional program. Furthermore, only a small number of DLE and TBE programs were included in this study.

A second limitation is that details regarding specific instructional components for each DLE and TBE program, such as the amount of instructional time spent in English or the students’ first language, for each DLE and TBE program was not determined. The data that were collected did not indicate whether all sample participants were enrolled in either a DLE or TBE program upon entry into the school district, or if the participants were enrolled continuously from kindergarten to third grade.

A third limitation is that data from only third grade ELs were collected. This minimizes the possibility of determining the true impact of the DLE programs.

Based on Collier and Thomas (2004) and Lindholm-Leary (2005) research-based
suggestion, in order for DLE programs to produce higher student outcomes, they need to be provided for a minimum of six years. At the third grade level, ELs have participated in the DLE program for four years; hence, not displaying the long-term effects of the DLE program.

A fourth limitation is that the only data collected was from the Chicago Public Schools (CPS). This may limit the generalizations to students who attend schools in other districts in Illinois that are comparable in demographics and have implemented DLE and TBE programs.

A fifth limitation is that the confounding variables of teacher qualifications and experience (or lack thereof), quality of instruction, teacher professional development, school climate, program quality, and level of teacher collaboration were not examined—all which have important implications on the success of DLE programs (Soltero, 2004) and TBE programs (Lara-Alecio & Parker, 1994).

A sixth limitation is the ELs’ socioeconomic status (SES) was not taken into account. Lindholm-Leary (2001) found that students’ second language reading performance was associated with their socioeconomic status (SES)—with mid-SES students outperforming low-SES students.

Finally, the living arrangements of the ELs, parental involvement, language spoken at home, and parent’s motivation for enrolling the ELs in either program were also not considered.
Implications

Contrary to several studies cited in Chapter Two suggest (Collier & Thomas, 2004; Howard et al., 2004; Lindholm-Leary, 2005; Nascimento, 2011; Thomas & Collier, 2002), the findings of this research study do not support that dual language education (DLE) programs in the Chicago Public Schools (CPS) yield higher reading achievement for ELs at the third grade level. Subsequently, bearing the limitations presented in the previous section, three critical implication of the result seems clear: (a) the CPS district should conduct program evaluation for the DLE and TBE programs in this study, (b) program administrators should communicate successes and strategies used with each other, and (c) special attention should be given to TBE2, since this school is clearly outperforming the others.

The CPS can collaborate with organizations that can provide program evaluation and research that can be used to improve the achievement of ELs in DLE and TBE programs—similar to what a few long-standing Chinese DLE programs across the United States did when they partnered with faculty and staff who specialize in DLE at the Center for Advanced Research on Language Acquisition (CARLA) (Asia Society, 2012). Together, DLE teachers, program coordinators, principals, and district administrators work with CARLA’s staff to overcome difficulties, advance best practice, and deliver professional development (Asia Society, 2012). The CPS can partner with regional organizations, such as the Illinois Resource Center, that specializes in providing
“assistance to teachers and administrators serving linguistically and culturally diverse students” (Illinois Resource Center, 2016, para. 1).

The CPS can also incite collaboration within programs by utilizing the example of the teachers and administrators who have worked the Chinese DLE programs. They share their experiences and resources with each other and with newly established programs around the country (Asia Society, 2012). These veteran DLE programs answer numerous inquiries made by email or phone, they host visitors, and they collaborate with one another on important tasks. One of those tasks was their handbook—*Chinese language learning in the early grades: A handbook of resources and best practices for Mandarin immersion*—where they gathered the recommendations of veteran Chinese DLE program administrators and teachers (Asia Society, 2012). Using the Chinese DLE programs as an example, the CPS district could support the development of DLE programs by identifying the schools that are experiencing success, sharing that information with other DLE programs, and supporting the schools’ efforts to collaborate and learn from one another.

Another recommendation for collaboration can be focusing on best practices for ELs in various language acquisition programs. For this to work, the CPS would have to identify specific practices from successful language acquisition programs such as TBE2, and create the platform where these successful strategies could be shared and implemented in other TBE schools throughout the district. The results of this study indicate that TBE2 has ELs that
are performing significantly better compared to those in the other TBE program and the two DLE programs. That alone is evidence enough to explore the instructional and assessment practices in this school.

**Recommendations for Future Research**

There are school districts across the nation with similar demographic backgrounds as the school district analyzed in this study; therefore, results similar to the ones presented in this study can be expected. Nevertheless, it is important to take into account the limitations of this study and consider the need for the following research studies:

1. A mixed methods study consisting of a longitudinal quantitative comparative analysis of the reading proficiency of English learners (ELs) in 3rd through 6th grade in DLE1, DLE2, TBE1, and TBE2, and a qualitative study that describes the practices of teachers and administrators in the programs.

2. A bilingual education program evaluation of TBE2 in order to determine if the success of ELs in this school can be attributed to the transitional bilingual education program.

3. Program evaluations of DLE1 and DLE2 in order to determine the extent to which each program implements dual language education successfully.

4. A longitudinal (K-12) analysis of the impact that dual language program participation had on the language acquisition and academic achievement of ELs that attended DLE1 and DLE2.
Conclusions

This is the first research study that addressed the question of whether English learners (ELs) enrolled in the Chicago Public Schools (CPS) in dual language education (DLE) programs are performing at higher levels than their peers in transitional bilingual education (TBE) programs. However, the findings of this study cannot be used to support the assertion that DLE programs are capable of providing ELs with the type of instruction that yield higher reading test scores at the third grade level. One reason for this is that the scores analyzed were of ELs who had been enrolled in programs for about four years—which does not constitute enough time for DLE program exposure according to the research (Collier & Thomas, 2004; Thomas & Collier, 2002; Lindholm-Leary, 2005). On the other hand, Crawford (2004) contends that any bilingual education program that uses the native language to develop the second language and utilizes a gradual transition to English—such as TBE programs—have often proven superior in promoting long-term achievement among ELs. This could explain why the TBE programs in this study outperformed the DLE programs in one of the reading assessments. Nevertheless, Crawford’s (2004) conclusion completely disregards multiple studies that have documented DLE programs ability to produce long-long term achievement among ELs (Collier & Thomas, 2004; Thomas & Collier, 2002; Lindholm-Leary, 2005; Ferron, 2011).

Although in this study, ELs in TBE2 program significantly outperformed those DLE2 in reading proficiency on the ISAT and ACCESS for ELLs, and all of
the TBE programs in this study significantly outperformed the DLE programs as measured by the ACCESS for ELLs reading proficiency levels; it is important to consider the limitations of this study when drawing conclusion from those results. This study only analyzed the results of third grade ELs, and it did not consider the long-term benefits that researchers have documented that support the use of DLE over TBE programs. Collier and Thomas (2004) and Lindholm-Leary (2005) suggested that DLE programs lead to higher student outcomes when they are provided for at least six years, and Ferron (2011) concluded that when ELs participate in DLE programs, once they are in high school they are able to get better results on standardized assessments, graduate as distinguished at higher rates, and perform more effectively in higher education courses and assessments.

The results of Collier and Thomas (2004), Lindholm-Leary (2005), and Ferron (2011) research support the need for CPS to conduct a longitudinal (K-12) analysis of the impact that dual language program participation had on the language acquisition and academic achievement of ELs that attended DLE1 and DLE2. Unfortunately, due to the results of this study, “there is always the danger that critics of bilingual education will seize on data… and use program results as ammunition in their ongoing battle against any form of bilingual education” (Gomez et al., 2005, p. 149), especially on the continued efforts of the CPS to implement more DLE programs. Nevertheless, this researcher hopes that the results of this study will contribute to improving bilingual education programs and
to the efforts of the CPS to provide guidance and assistance to school
administrators and school district personnel as they evaluate the structure and
effectiveness of their language acquisition programs and make decisions for ELs
in the future.
REFERENCES


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Appendix A: Overview of School Quality Policy in CPS

School Quality Rating Policy (SQRP) Overview

What is the SQRP and what schools does it cover?
The School Quality Rating Policy is the Board of Education’s policy for evaluating school performance. Through this policy, each school receives a **School Quality Rating** and an **Accountability Status** every year. Among other things, the SQRP helps to communicate to school stakeholders the academic success of individual schools and the district as a whole; provides a framework for school goal-setting; and guides the Board’s decision-making processes around school support and intervention.

All schools receive a rating, including neighborhood schools, magnet schools, charter schools, selective enrollment schools and option schools.

What indicators are included in the SQRP?
Because different schools serve different populations of students, the SQRP uses different indicators for each type of school. The included indicators are as follows:

<table>
<thead>
<tr>
<th>Elementary Schools</th>
<th>High Schools</th>
<th>Option Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student attainment on the NWEA MAP test</td>
<td>Student attainment on the EPAS tests</td>
<td>Student growth on the STAR test</td>
</tr>
<tr>
<td>Student growth on the NWEA MAP test</td>
<td>Student growth on the EPAS tests</td>
<td>Graduation rate</td>
</tr>
<tr>
<td>Student attendance</td>
<td>Student attendance</td>
<td>Enrollment stabilization</td>
</tr>
<tr>
<td>My Voice, My School survey</td>
<td>Graduation rate</td>
<td>Student attendance</td>
</tr>
<tr>
<td>Student growth on ACCESS for English Learners</td>
<td>Freshman on-track rate</td>
<td>Credit attainment</td>
</tr>
<tr>
<td>Data quality</td>
<td>Dropout rate</td>
<td></td>
</tr>
</tbody>
</table>

How is a school’s rating calculated?
For each of the indicators above, a school can score between one and five points. The indicator scores are then averaged (some indicators are weighted higher than others in this average). The weighted average – which will also fall between one and five points – is then used to determine a school’s rating and status based on the table below.

<table>
<thead>
<tr>
<th>Overall Score</th>
<th>Minimum Attainment Percentile</th>
<th>School Quality Rating</th>
<th>Accountability Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0 or more</td>
<td>90th Percentile</td>
<td>Level 1+</td>
<td>Good Standing</td>
</tr>
<tr>
<td>Between 3.5 and 3.9</td>
<td>70th Percentile</td>
<td>Level 1</td>
<td>Good Standing</td>
</tr>
<tr>
<td>Between 3.0 and 3.4</td>
<td>50th Percentile</td>
<td>Level 2</td>
<td>Provisional Support</td>
</tr>
<tr>
<td>Between 2.0 and 2.9</td>
<td>40th Percentile</td>
<td>Level 3</td>
<td>Intensive Support</td>
</tr>
<tr>
<td>Less than 2.0</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
School Quality Rating Policy (SQRP) Overview

What does the school’s rating mean?
- **Level 1+** is the highest performance – this is a nationally competitive school with the opportunity to share best practices with others.
- **Level 1** is high performance – this is a good school choice with many positive qualities. Minimal support is needed.
- **Level 2+** is average performance – Additional support from the network team is needed to implement interventions.
- **Level 2** is below average performance. The “provisional support” status requires increased support from the network.
- **Level 3** is the lowest performance; school is in need of “Intensive Intervention” directed by the district. Charter schools in this category are on Academic Warning List.

What does a school’s status mean?
A school’s status determines who has decision-making power at the school level.
- **Good Standing** is a school that has met or exceeded the district’s minimum performance standards. These schools must follow district policies and mandates, but the LSC retains all normal autonomy.
- **Provisional Support** means that the school needs increased support. The network and CEO may require the school to revise its Continuous Improvement Work Plan (CIWP) and/or budget and may require specific professional development.
- **Intensive Support** means the school needs a high level of support. In addition to the interventions listed for Provisional Support, the Board of Education may – in extreme cases – take actions such as a turnaround or principal removal. These actions will not happen in all Intensive Support schools and require a public hearing.

What is the difference between attainment and growth? Which matters more?
Both attainment and growth measure a school’s performance compared to other schools nationwide.

Attainment measures performance at a single point in time compared to schools nationally. So if a school’s attainment is in the 85th percentile, that means the school had higher scores than 85 percent of the schools who took the test at the same time.

Growth measures performance from one year to the next. It evaluates a school’s performance based on how much growth occurred compared to other schools nationally with the same pretest score. So if a school’s growth is in the 85th percentile, that means the school showed more growth than 85 percent of the schools who started at the same place the previous year.

Both attainment and growth matter, but growth is weighted more in the SQRP. That is because schools start in different places, and growth takes that into consideration. Attainment is a good indicator of how ready students are for their next step (high school, college, careers). Growth is a good indicator of how much they are learning, and therefore how effective the school is at providing instruction.

Where can I find more information?
Principals, school offices and network offices are always great resources for more information. General information on SQRP can be found at cps.edu/sqrp and school-specific information is available on school profile pages (cps.edu/findaschool). The Office of Accountability is also available at 773-553-4444.