3-18-2015

Survival Analysis: Timelines to English Language Proficiency at the Secondary School Level

Elisha W. Beardsley
Bellarmine University, ebeardsley01@bellarmine.edu

Survival Analysis: Timelines to English Language Proficiency at the Secondary School Level

By Elisha Worthington Buerk Beardsley

B.A. in English, August 1998, Indiana University - Bloomington

M.S. in Language Education, December 2000, Indiana University - Bloomington

A Dissertation Submitted to

The Faculty of

The Annsley Frazier Thornton School of Education

Bellarmine University

In partial fulfillment of the requirements

for the degree of Doctor of Philosophy in Education and Social Change

March 18, 2015

Dissertation directed by

Dr. Kathleen S. Cooter

Professor Annsley Frazier Thornton School of Education

BELLARMINE UNIVERSITY

The Annsley Frazier Thornton School of Education of Bellarmine University certifies that Elisha Worthing Buerk Beardsley has successfully defended his dissertation for the degree of Doctor of Philosophy in Education and Social Change as of March 18, 2015. This is the final and approved form of the dissertation.

Survival Analysis: Timelines to English Language Proficiency at the Secondary School Level

Elisha Worthington Buerk Beardsley

Dissertation Research Committee:

Dr. Kathleen S. Cooter, Professor of Education, Annsley Frazier Thornton School of Education of Bellarmine University

Dissertation Director

Dr. Grant Smith, Assistant Professor of Educational Research, Annsley Frazier Thornton School of Education of Bellarmine University

Committee Member

Dr. Jayne Kraemer, ESL Staff Developer, ESL Department, Jefferson County Public Schools

Committee Member

Dedication

I dedicate my dissertation to the English language learners of a large, urban district in the South Central part of the United States, particularly those at the high school level and newly arrived to our country. To the ELL students – their multi-lingual abilities, their steadfast perseverance, their resiliency, and their wonderful cultural diversity that brightens our hallways and classrooms are all assets - I am continually amazed by their levels of growth and success. They embody the essence of what our country was founded on – grit, character, determination, and unwavering hope.

Acknowledgements

Above all, I am grateful to God for His supreme guidance and love. He opened my heart, my mind, and provided the endurance for me and my family to complete this program. I am reminded by Thessalonians 1:3, "We remember before our God and Father your work produced by faith, your labor prompted by love, and your endurance inspired by hope in our Lord Jesus Christ."

To my beautiful wife - Alonna, thank you, those 8 letters do not seem to elicit the sincerity I reach for, but from the bottom of my heart, THANK YOU, for believing in me, for loving me so profoundly and unconditionally, and sacrificing 108 Friday nights and Saturdays. To my angels and inspiration – Monroe and Willow, your smiling faces were always by my side and close to my heart. Monroe, you have a contagious curiosity about the world that has inspired me throughout this journey. Willow, the world welcomed your stunning eyes just 3 days after the first semester finished, the first Bellarmine PhD Baby! To my father, Stephen, thank you for instilling the love of words at an early age. As part of our Cross-Cultural Experience in London, I was able to fulfill a lifelong dream of visiting Dr. Samuel Johnson's house and the 3rd floor, affectionately known as the Garret, where Dr. Samuel Johnson complied the pre-eminent English dictionary in 1755. I placed my hand on the worn newel post that I am confident Dr. Johnson placed his same hand numerous times. To my mother, Debbie, I am grateful for a lifetime of modeling what tenacity and determination look like. I am extremely appreciate of your receptive ear in all things PhD and professional. You have always been a positive sounding-board and offered rock-solid advice. To Diane and Jimmy, I am indebted to your willingness to support our family to the n^{th} degree. Finally, to Forrest and Nancy Turley, we broke ground on this journey after a routine evening walk, standing against your impressive sandstone wall, when you asked

me if I had ever thought about working towards my principal's license. Forrest and Nancy, it is with exceptional gratitude that I can confidently say we have crossed the finished line. Your unfaltering and unconditional love and support lives on in me and will be passed along to Monroe and Willow.

In addition, I would like to thank Dr. Joy Egbert for introducing me to the fascinating world of English language learners and encouraging me to take those next steps. I would also like to thank Dr. Robert Cooter and Dr. Kathleen Cooter for realizing the Bellarmine PhD Program in Education and Social Change. Their steadfast commitment to change the lives of families in the circumstance of poverty is testament to the true nature of change agents. They ignited a spark in me that has changed the course of my life. I am constantly grateful for them taking a chance on me and believing in me. Dr. Grant Smith, thank you for your outstanding teaching and re-teaching. I would also like to thank Dr. Jayne Kraemer for taking the time to mentor me. Dr. Kraemer's willingness to go above and beyond speaks volumes of her character. Terri Boss, thank you for your support and willingness to be part of this project. Finally, a special recognition to Dr. Marco Muñoz for his excellent guidance and constant support.

Abstract of the Dissertation

The ELL population in the United States continues to increase. Research suggests that the English language proficiency growth rates for numerous ELL students are strongly correlated with their English language proficiency levels (Cook & Zhao, 2011; Conger, 2008). The results of Conger's 2008 study suggested that just over fifty percent of students gained English language proficiency after three years. According to the same study, the students that did not typically gain English language proficiency were students who entered public schools older and with a lower English language proficiency level. The current study examines the likelihood of high school ELLs in a large, urban district in achieving English language proficiency as measured on the ACCESS for ELLs®. Survival analysis is a robust analytic technique that complements the highly mobile tendencies of ELL students, the ever-expanding ELL population, and the varying English language proficiency timelines. A second survival analysis was performed with language as an additional factor. The analysis suggested the probability of achieving English language proficiency was approximately 20 percent. The analysis indicated there were significant differences between native language groups, demonstrating different languages responded differently to timelines to English language proficiency. If the federal accountability frameworks fail to carefully examine English language proficiency levels, both states and federal educational frameworks risk misjudging expected English language proficiency timelines.

Table of Contents

List of Figures

Page

List of Tables

Page

Chapter 1: Introduction

Overview

The accountability requirements of both Title I and Title III of the No Child Left Behind Act of 2001 (NCLB, 2001) categorize English language learners as a homogenous, unified group with similar characteristics, but ELLs represent a continuum of educational backgrounds from formal education to no formal education (Abedi, 2004; DeCapua & Marshall, 2010; Short, 2002; Freeman & Freeman, 2002; Cook & Zhao, 2011). The ELL group has a constant stream of students new to the United States educational system with varying levels of English proficiency (Cook & Zhao, 2011; Abedi & Dietel, 2004; Crawford, 2004; Abedi, 2004). Therefore, from both an accountability and policy perspective, federal policy should expand the policy definitions of English Language Learners to more carefully match similarities in educational backgrounds as well as language proficiencies (Cook & Zhao, 2011; Linquanti & Cook, 2013; Conger, 2008).

> Assessment impacts ELL (English Language Learner) students' academic lives in many different ways. In the classroom, assessment of ELL students affects planning of their curriculum and instruction. In particular, ELP (English Language Proficiency) assessment plays a major part in the classification and grouping of ELL students. A student's level of English proficiency serves as the most important criteria for the classification that determines their level of proficiency in English and guides the prescription of any needed instruction and instructional material. (Abedi, 2007, p. 4)

The population trend for English-Language Learners (ELLs) in the United States continues to increase. The National Clearinghouse for English Language Acquisition (NCELA) estimated that by the year 2025, one in four students across the United States will be an ELL (NCELA, 2006). The National Center for Education Statistics (2014) reported the number of

ELL students in public schools in 2002-2003 to be 4.1 million, or about 8.7 percent. In the school year 2011-2012, this same group grew to 4.4 million students, or about 9.1 percent. The eight states of Alaska, California, Colorado, Hawaii, Nevada, New Mexico, Oregon, and Texas had more than 10 percent of their public school students designated as ELLs, with California at 23.2 percent (NCES, 2014). The state of Kentucky has experienced a 306 percent increase in English language learners (ELL) over a ten year period, from the 2001 – 2011 (Horsford & Simpson, 2013). According to the most recent data, 2012 -2013 school year, twenty-one percent of all ELLs in Kentucky attended a large, urban district (Kentucky Department of Education, 2015).

Additionally, the number of refugees coming to the United States continues to increase. From 2007 to 2012, the Office of Refugee Resettlement, an Office of the Administration for Children and Families, under the United States Department of Health and Human Services, served an estimated 371,000 new arrivals (Office of Refugee Resettlement, 2012). During this same time period, the Office of Refugee Resettlement in Kentucky resettled 8,630 refugees (Office of Refugee Resettlement, 2012). In 2012, Kentucky received 1,452 new refugees, which represented 2.49 percent of the total refugees resettled across the United States.

For the academic year, 2013-2014, the large, urban district reported an LEP (Limited English Proficient) population across K-12 of 6,229, which represented 6.2 percent of the total student population (School system data source 1, 2014). Under Title III, Section 3302 of the No Child Left Behind Act of 2001 (NCLB, 2001), parents or guardians have the right to accept English language support services or they can elect to waive these services. This number reflected both groups of LEP students, ESL program students and waived students. The school district in this study gained 452 LEP students from the 2012-2013 school year to the 2013-2014

school year. The majority of these students were at the elementary level, approximately 63 percent, or 3,961 students. The middle school total was 893 students, or about 14 percent of the total student population. The high school level accounted for 938 students, or about 15 percent. Table 1 below charts the growth trends in this district.

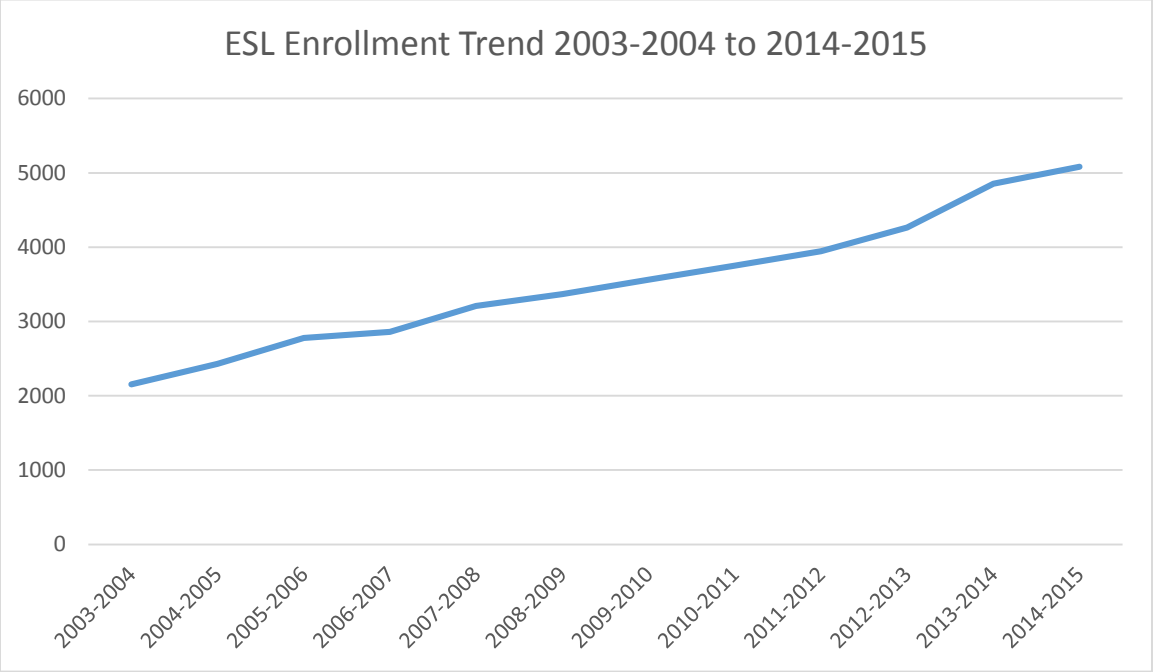


Table 1: ESL Trend Data for a large, urban district.

School Year	ESL Count	Percent Growth
2003-04	2153	11.73
2004-04	2429	12.82
2005-06	2779	14.41
2006-07	2860	2.91
2007-08	3210	12.24
2008-09	3366	4.86

2009-10	3563	5.85
2010-11	3753	5.33
2011-12	3945	5.12
2012-13	4264	8.09
2013-14	4852	13.79

ELLs face many obstacles both culturally and academically (DeCapua & Marshall, 2010; Short, 2010; Freeman & Freeman, 2002). In a limited amount of time, ELLs must navigate the academic language of content while negotiating potentially different cultural systems (DeCapua & Marshall, 2010; Crawford, 2004). These unique students bring with them the full spectrum of experiences in terms of culture, linguistic ability, English language proficiency, literacy development in both native language and English, and education (DeCapua & Marshall, 2010; Peregroy & Boyle, 2000; Rong & Preissle, 2009; Abedi & Dietel, 2004).

In an effort to discern commonalities useful for grouping and instruction, ELL researchers have introduced vocabulary specific to some ELL students, regardless of ethnicity, country of origin, or native language. The New York State Department of Education coined the term *Students with Interrupted Formal Education* or *SIFE* (New York State Department of Education, 2011, p. 2). Additional terminology includes "limited or little prior formal education" (Freeman & Freeman, 2002, p. 112), "newcomers" (Short, 2002, p. 2), "students with limited or interrupted formal education (SLIFE)" (DeCapua & Marshall, 2010, p. 50), or "unschooled migrant youth" (Morse, 1997 p. 2). Regardless of assigned nomenclature, this subgroup of ELLs share common characteristics of limited or no native language literacy in addition to limited or no formal education (DeCapua & Marshall, 2010).

Statement of Problem

Under current federal policy, the No Child Left Behind Act of 2001 (NCLB, 2001) characterizes ELLs as a unified, homogenous group, but students enter the United States public school systems with a wide range of educational backgrounds and life experiences (DeCapua & Marshall, 2010; Peregroy & Boyle, 2000; Rong & Preissle, 2009; Freeman & Freeman, 2002; Abedi & Dietel, 2004). One of the defining features of the NCLB accountability framework requires Annual Measurable Achievement Objectives (AMAOs) for all students (NCLB, 2001). Section 3122 of Title III states that all LEP students are to be assessed in both academic content knowledge and academic English language proficiency (NCLB, 2001). In addition, federal policy does not allow states to adjust accountability requirements for ELLs (Boyle, Taylor, Hurlburt, & Soga, 2010; Cook & Zhao, 2011). The Kentucky Board of Education and Kentucky Department of Education (2014), have identified policies for ELLs in the document, 703 KAR 5:070, *Procedures for inclusion of special populations in the state-required assessment and accountability programs*. According to this state statue, all ELLs must participate in the following:

- The state approved English language proficiency assessment annually, regardless of time enrolled in a U. S. school.
- All state-required assessments after one full year of enrollment. The first full year of enrollment is defined as 240 days or 12 months. These are cumulative.
- ELLs in their first year of enrollment in a U. S. school are not required to participate in the state-required reading, social studies, or writing (language mechanics and on-demand) assessments. For these students, these assessments

are optional and at the discretion of the school and district. This is a one-time exemption.

- A mathematics test for participation only (if a student is enrolled in a grade in which a mathematics test is administered) for the first year ESL services with appropriate accommodations noted in the ELLs Program Service Plan (PSP).
- A science test for participation only (if a student is enrolled in a grade in which a science test is administered) for the first year ESL services with appropriate accommodations noted in the ELLs Program Service Plan (PSP).

Research suggests that growth trajectories of English language proficiency for many ELL students are strongly correlated with their initial English language proficiency levels (Cook & Zhao, 2011; Conger, 2008). If the accountability framework fails to carefully examine initial English language proficiency levels, both state and federal educational frameworks risk underestimating expected English language proficiency timelines.

Secondary ELL students entering the United States educational system for the first time have specific challenges. These challenges include earning credit, drop-out rates, credit-recovery, graduating within the appropriated age guidelines, exit examinations, language acquisition while simultaneously learning academic content, state accountability for end of course exams, and yearly federal accountability measures (Short, 2010; Short & Boyson, 2012; Conger, 2008; Cook & Zhao, 2011; Giambo, 2010; Leckie, Kaplan, Rubinstein-Avila, 2013).

In an effort to alleviate some of the transitioning challenges, a multitude of school districts designed and opened newcomer centers (Short & Boyson, 2012). The primary objectives of the newcomer centers for students are to develop English skills, assist in the

acculturation process of U.S. schools, and serve as an access point for educational opportunities and expectations (Boyson & Short, 2003; Short & Boyson, 2012). The large, urban school district in this study opened its newcomer center in 2006. According to documents from the district's ESL Department, the newcomer center enrolls students year round. The newcomer center has grades six through ten. At the high school level, grades 9 and 10, ELL students typically stay for one to two years and then transition out to other local high schools. Approximately seventy five percent of the ELL students are refugees, while an estimated twenty five percent have limited or interrupted formal education (G. Snow, personal communication, September 7, 2014).

Although secondary newcomer ELL students may be entering the United States public school systems for the first time, the No Child Left Behind Act of 2001 (NCLB, 2001) mandates that all ELL students must be assessed annually in the both academic content as well as the academic language proficiency domains of reading, writing, listening, speaking and comprehension (Kenyon, MacGregor, Li, & Cook, 2011; Bailey & Huang, 2011; Menken, 2010; Deville & Chalhoub-Deville, 2011). In addition to the yearly assessment structures, "under Title III of Public Law 107-110, the No Child Left Behind Act of 2001, states that did not already have existing English Language Development / Proficiency standards were required to create such standards" (Bailey & Huang, 2011, p. 344). In addition, Abedi (2007) outlined the additional state requirements under NCLB, Title III, as the following:

1. develop and implement ELP standards suitable for ELL students' learning of English as a second language;
2. implement a single, reliable and valid ELP assessment aligned to ELP standards that annually measures listening, speaking, reading, writing, and comprehension;

3. align these tests with the states' English language development content standards and provide content coverage across three academic topic areas which include: English/Language Arts; Math, Science, and Technology; and Social Studies as well as one non-academic topic areas related to school environment, such as extra-curricular activities, student health, homework, and classroom management (Fast, Ferrara & Conrad, 2004)

In 2002, the U. S. Department of Education, under Title III of Public Law 107-110 NCLB (NCLB, 2001) published a request for proposals to apply for grant funding to develop assessment instruments and matching English Language Development standards for compliance under NCLB (Bunch, 2011). The U. S. Department of Education received nine proposals, but selected only four consortia. These consortia consisted of a lead state and a partnering educational agency. The four lead states and consortium names were Wisconsin (WIDA), Utah (Mountain West), Pennsylvania (Accountability Works), and Nevada (LEP SCASS) and that the general characteristics of the assessments were similar (Bunch, 2011). Wisconsin developed the consortium with the Center for Applied Linguistics (CAL). The consortium name, WIDA, was originally an acronym for Wisconsin, Delaware, and Arkansas. Now, WIDA stands for World-Class Instructional Design and Assessment (Bunch, 2011; WIDA website, 2014). Kentucky is a WIDA member state and joined in 2006 (Kentucky Department of Education, 2015).

The Annual Measurable Achievement Outcomes (AMAOs) of Title III, Section 3122 of the No Child Left Behind Act of 2001 (NCLB, 2001) states that all ELLs must be assessed annually in the four English language domains of speaking, writing, reading, and listening. The AMAOs are further defined as the following three types:

(i) at a minimum, annual increases in the number or percentage of children making progress in learning English;

(ii) at a minimum, annual increases in the number or percentage of children attaining English proficiency by the end of the each school year, as determined by a valid and reliable assessment of English proficiency; and

(iii) making adequately yearly progress in academic achievement tests for limited English proficient children (U. S. Department of Education, http://www2.ed.gov/policy/elsec/leg/esea02/pg42.html)

Results from these annual AMAOs have the potential to influence both state departments of education and local school district policies (Deville & Chalhoub-Deville, 2011). Although NCLB requires reporting English language proficiency assessments results to satisfy accountability measures, these English language proficiency assessments have additional benefits. Cook, Kenyon, and MacGregor (2011) assert that the English proficiency assessments may also be used for making decisions on individual student placements like initial placement levels, as a component of exit criteria, or to evaluate the effectiveness of ESL programs.

In 2002, in an effort to satisfy NCLB requirements, WIDA completed the English Language Proficiency Standards (Gottlieb, 2004). Over the next two years, the research and design team developed the initial version of the NCLB compliant, high-stakes, English language proficiency assessment, named the *Assessing for Comprehension and Communication in English State-to-State for English Language Learners* (ACCESS for ELLs®) (Kenyon, 2006). In 2004, the ACCESS for ELLs® field test for listening, reading, and writing was conducted with 6,662 students from Illinois, Wisconsin, Arkansas, Rhode Island, the District of Columbia, Delaware, Maine, and Vermont (WIDA, 2014). During the 2013-2014 school year, thirty-three states

participated in the ACCESS for ELLs® assessment, assessing 1,372,611 students (WIDA, 2014). Over the last thirteen years, WIDA has grown from three states to include thirty-five states.

Although the principal intentions of the No Child Left Behind Act of 2001 were to increase expectations for all students and close the achievement gap between different subgroups of students, NCLB (2001) created challenges and consequences, especially in regards to the ELL subgroup (Abedi & Dietel, 2004; Menken, 2010; Abedi, 2004; Crawford, 2004). Abedi and Dietel (2004) outlined the challenge of historically low ELL performance within the ELL subgroup. Abedi and Dietel (2004) cited 2003 data from 10th grade, high-stakes, English language arts assessments in Massachusetts, in which the achievement gap between ELL students and non-ELL students reached 49 percent. In addition, the National Assessment of Education Progress (NAEP) data for both Grade 8 reading and math, clearly demonstrated that English Language Learners continue to struggle academically in school (NCES, 2014). The achievement gap between ELL students and non-ELLs students was 45 points for reading at the 8th grade level (NCES, 2014). The National Center for Education Statistics (2014) stated that 2013 ELL reading achievement gap was not measurably different from the gap in either 2011 or 1998.

A consequence of NCLB legislation has been the decision of some states to require graduation or exit exams (Menken, 2008). According to a report from McIntosh (2012) twenty-five states conducted exit exams in 2011-2012. Approximately sixty-nine percent of the students in the United States attended school in states with exit exams, including eighty-three percent of ELLs (McIntosh, 2012). Menken (2010) stated, "the reality is that when a test is given in English to ELLs, it becomes impossible to entirely divorce language proficiency from content knowledge" (p. 123). Menken (2010) reported that the 2003 New York state graduation rate was

69 percent for non-ELL students and only 25 percent for ELL students. Since the implementation of the New York State Regents graduation exam, the ELL dropout rate increased almost nine percentage points, from 21 percent to 29 percent (Menken, 2009). Although twenty two of the twenty five states that require a graduation exit exam provided an alternative path for students who did not pass the exam, only three states had a specialized path for ELL students who did not pass (McIntosh, 2012).

Ruiz de Velasco and Fix (2000) stated that Limited English Proficient (LEP) students were less likely to finish secondary school and graduate than other non-LEP immigrant students. The authors asserted that in comparison groups, LEP students born in the United States were almost twice as likely to drop-out (38.7 percent) as either foreign born immigrants (21.5 percent) or U. S. born immigrants who are not LEP (21.0 percent). Kim (2011) used state-wide data to conclude that the ELL drop-out rate in an anonymous state was 25 percent compared to 15 percent for non-ELL students. Kim further concluded that the longer a student was designated as ELL status, the higher the likelihood of dropping-out.

Purpose

The purpose of the study is to examine the effect of time and native language on English language proficiency for high school ELL students in the large, urban school district in Kentucky. The study examines the Overall Composite scores on the ACCESS for ELLs® English language proficiency assessment. Data from the ACCESS for ELLs® assessment from the school years 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are analyzed. The study investigates the impact of time and native language for a group of high school ELL students on the path to English language proficiency as determined by scores on the ACCESS for

ELLs® assessment. This study utilizes survival analysis, a statistical approach designed to predict the time it takes for an event to occur, to estimate the likelihood to reach English language proficiency according to the LEP status-exit criteria for Kentucky. The exit criteria for Kentucky are the combination of an Overall Composite Score of 5.0 and an Overall Literacy Composite of 4.0 on the ACCESS for ELLs® assessment. The outcomes have the potential to describe expected high school student timelines to English language proficiency in terms of proficiency levels and native language. The results have the potential to expand the definition of a secondary English language learner to more accurately match specific student backgrounds.

Data available

In this large, urban school district in Kentucky, the ACCESS for ELLs® assessment is given every year with a six week testing window of January and February to all students identified as Limited English Proficient (LEP) who have not been Re-designated Fully English Proficient (RFEP). As students enter this public school district, families are given a Home Language Survey (HLS) to identify students who speak a language other than English at home. The four primary questions for the Home Language Survey are the following:

- What is the language most frequently spoken at home?
- Which language did your child learn when they first began to talk?
- What language does your child most frequently speak at home?
- What language do you most frequently speak to your child?

If families indicate that a language other than English is spoken in the home on any of the questions, the incoming student is given the W-APT (WIDA-ACCESS Placement Test) initial English language assessment. WIDA describes this assessment as a "screening" instrument that

allows districts to make programmatic decision on English language support and services (WIDA, 2014). The possible outcomes from the W-APT are either IFEP (Initially Fully English Proficient) or LEP (see Appendix for Kentucky Department of Education flowchart).

The exit criteria to move from LEP to RFEP is the achievement of an Overall Composite Score of 5.0 or higher and an Overall Literacy Composite of 4.0 on Tier B or Tier C ACCESS for ELLs® assessment as determined by the Kentucky Department of Education (KDE, 2015). The ACCESS for ELLs® assesses the four language domains of speaking, listening, reading, and writing across the five standards of social studies, language arts, science, mathematics, and English for social and instructional purposes. The available data include the following list: an Overall Composite Score reflecting all domains; an Oral Language Composite Score (listening and speaking); a Literacy Composite Score (reading and writing); a Comprehension Composite Score (listening and reading). The Overall Composite Score is weighted as 15 percent listening, 15 percent speaking, 35 percent reading, and 35 percent writing. The scores on the ACCESS for ELLs® assessment range from 1.0 to 6.0. For the study, the Overall Composite Scores were analyzed for ELL students at the high school level during the school years 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014. Additional data available for analysis include native language for the high school ELL student population.

Research Questions:

The objective of this study was to evaluate the timelines to English language proficiency for high school students new to ESL instructional programs in a large urban school district. The research questions guiding the study are:

1. What is the likelihood that all high school ELL students in English language instructional programs will attain English proficiency on the ACCESS for ELLs® assessment prior to graduation?
2. Does success rate (attaining English language proficiency) on the ACCESS for ELLs® assessment vary by language or language group?

It is hypothesized that most high school ELL students will not exit LEP (Limited English Proficient) status in four years or less. In addition, it is hypothesized that not all language groups will demonstrate English language proficiency timelines at the same rate.

Significance of Study

The significance of the study is to estimate timelines to proficiency for high school ELL students in order to more accurately match characteristics of the ELL population to the definition of ELLs. The ELL student population is the fastest growing population in the United States (U. S. Department of Education, 2013; DeCapua & Marshall, 2010; DeCapua & Marshall, 2011). The examination of this data could be beneficial in guiding English language proficiency time expectations for accountability requirements under NCLB at both the district level and state level. The ability to expand and re-define the federal policy definition of English language learners to include specific categorical factors like English language proficiency level, prior educational experience, and native literacy level would provide more realistic timelines to English language proficiency. In general, ELL students at lower English language proficiency levels require more time to reach English language proficiency (Cook & Zhao, 2011; Linquanti & Cook, 2013; Conger, 2008).

The use of discrete-time survival analysis in the study allows the researcher to estimate the likelihood of reaching English language proficiency. While similar studies have been conducted at the elementary level, a need exists to expand these statistical techniques to the secondary level (Conger, 2008; Cook & Zhao, 2011). This study contributes to the limited body of empirical secondary ELL research.

Conceptual Framework

The theoretical basis for this study is the Critical Period Hypothesis. The Critical Period Hypothesis has its origins in the field of neuro-linguistics with the seminal work of Penfield and Roberts (1959). They as well as numerous others stated that the language acquisition process is defined by critical onsets and offsets (Lenneberg, 1967; Singleton, 2005; Hyltenstam & Abrahamsson, 2003; Johnson & Newport, 1989; Birdsong, 1999). The critical onsets and offsets refer to age range from an onset of age 2 to an offset of puberty. The interplay between age and second language acquisition has led numerous researchers to define distinct ages when the language acquisition process is optimal. Birdsong (1999) terms this distinct age a "window of opportunity" (p. 1). After this "window of opportunity" has passed, the ability to learn languages declines. This study concentrates on the intersection of English language proficiency level, native language, and time to English language proficiency to examine the Critical Period Hypothesis with high school ELL students.

Summary of Methodology

This study concentrates on the two statistical approaches of descriptive analysis and survival analysis. Descriptive analysis offers the opportunity to examine the English language proficiency scores and percent of students related to time, grade level, and proficiency level.

Survival analysis is a statistical approach designed to predict the time it takes for an event to occur, specific to this study, the timeline to English language proficiency. One of the major strengths of this statistical approach is the ability of survival analysis to manage longitudinal data. This analytic approach can censor data, specifically right censor, to account for not only attrition, but also ELL students that enter the ESL program after the first year of the study.

Limitations

The researcher narrowed the study to one school district and concentrated on the high school level only. Although the school district has a proportionately higher number of elementary schools, the study did not attempt to make comparisons at the elementary or middle school level. The data and discussion did not summarize all ELL students, but rather highlighted high school ELL students. The data for this study was gathered from the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 school years and analyzed during the 2014-2015 school year.

Definitions of Terms

Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs®): a NCLB compliant, standards-based, English language proficiency, K-12 assessment (WIDA, 2014).

English Language Learner (ELL): English language learners is defined as a student who has not scored at the proficient level or above on ACCESS for ELLs® (Kentucky Department of Education, 2014).

Limited English Proficient (LEP): The term limited English proficient, when used with

respect to an individual, means an individual —

(A) who is aged 3 through 21;

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

(C) (i) who was not born in the United States or whose native language is a language other than English;

(ii) (I) who is a Native American or Alaska Native, or a native resident of the outlying areas; and

(II) who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency; or

(iii) who is migratory, whose native language is a language other than English, and who comes from an environment where a language other than English is dominant; and

(D) whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual —

(i) the ability to meet the State's proficient level of achievement on State assessments described in section 1111(b)(3);

(ii) the ability to successfully achieve in classrooms where the language of instruction is English; or

(iii) the opportunity to participate fully in society.

(NCLB, Section 9101 (25), 2001)

Re-designated Fully English Proficient (RFEP): The term Re-designated Fully English Proficient refers to an English language learner who has demonstrated English at

a proficiently level compared to a native English speaker. In addition, this student has an Overall Composite Score of 5.0 or higher and an Overall Literacy Composite of 4.0 on a Tier B or Tier C ACCESS for ELLs® assessment (Kentucky Department of Education, 2014).

Chapter 2: Review of the Literature

> Language is the gateway for learning and the vehicle that facilitates acquisition of new knowledge through direct and indirect interaction with other humans, as well as through the reflective processes of introspection (Francis & Rivera, p. 13, 2007).

Introduction

The purpose of this section is to review the relevant literature on the English language proficiency growth of English Language Learners (ELLs). This review commences with a brief history of newcomer programs, newcomer students, and demographics of high school ELLs in a large, urban school district in the south-central part of the United States. The second section outlines academic considerations and challenges that secondary educational settings face with a subgroup within the ELL population, students with interrupted or limited formal education (SLIFE) and refugees. The third section highlights how cognitive, sociocultural, and chaos / complexity theories influence second language acquisition. The next section describes how the theoretical model of the Critical Period Hypothesis informs this study. The purpose of the final section is to describe the history and development of the Assessing Comprehension and Communication in English State to State for English Language Learners (ACCESS for ELLs®) assessment that 33 states use for accountability under NCLB (2001).

Brief History of Newcomer Programs

Over the past four decades, the emergence of K-12 newcomer programs has matched the rising trend of recent immigrants with limited or no English language skills (Basting, 2004). Although newcomer programs vary in terms of size, design features, programming, and number of years for attendance, the primary objectives of the newcomer programs are to assist students

in the development of English skills, assist students in the acculturation process of U.S. schools, and serve as an access point for educational opportunities and expectations (Boyson & Short, 2003; Short & Boyson, 2012).

Currently, no federal blueprints exist for the creation of a newcomer program. Numerous researchers in the field of English Language Learners have offered recommendations (see Boyson & Short, 2003; Short & Boyson, 2012). These specialty schools are intentionally designed to match services and support potential gaps in students' learning needs, changes in cultural expectations, and regular language support (Boyson & Short, 2003). Short and Boyson (2012) offer a definition of a newcomer program as, "a specialized academic environment that serves newly arrived, immigrant English language learners for a limited period of time," (p.1).

In 2012, the Center for Applied Linguistics (CAL) published the results of a national, three year research study of secondary school newcomer programs. The study produced an online, searchable database with newcomer program profiles. A total of 63 newcomer programs responded to the CAL survey. As of the 2011 study, 63 newcomer programs stretch across 24 states, working with approximately 10,899 secondary students (Short & Boyson, 2012). The large, urban district in the current study was not part of this database. In addition, the research included 10 case studies intended to uncover exemplary practices in language support programs, academic growth, and effective transitions to regular secondary settings or beyond (Short & Boyson, 2012).

The design features of newcomer programs fluctuate depending on school district, allocation of financial resources, physical space, and student population (Boyson & Short, 2003; Short & Boyson, 2012). The three principal types of newcomer programs are programs within

school, separate site programs, and whole school programs. Each program design carries both strengths and weaknesses. Whole school programs, like Columbus Global Academy in Columbus, Ohio, do not transition students out of the program, but have the academic credentialing capabilities to grant high school diplomas (Columbus City Schools, 2015). As a component of the data collection at the secondary level in Kentucky, the newcomer program involved in this study is considered a separate site program.

Although newcomer models vary by scope, physical location, and length of stay, Short and Boyson (2012) offer a wide ranging definition of the newcomer program as, "a specialized academic environment that serves newly arrived, immigrant English language learners for a limited period of time," (p.1). Newcomer programs typically go beyond both traditional English as a Second Language (ESL) and bilingual programs because of the intense concentration on cultural assimilation and the early building blocks of literacy. The first newcomer programs were conceptualized in the United States in the late 1970s (Feinburg, 2000; Friedlander, 1991; Perkins, 2000; Short, 1998; Short & Boyson, 2000). Throughout the 1970s, 1980s, and into the 1990s, there was limited research or data collection on newcomer programs (Basting, 2004).

In 1996, researcher Deborah Short partnered with the Center for Applied Linguistics (CAL) to build the first newcomer database. This was a significant step forward in terms of resources because the database grouped newcomer programs by design, delivery of services, and program participation. In the 2000-2001 database, Boyson and Short (2003) listed 115 programs in the database. In the most recent publication, Short and Boyson (2012) have updated the online, searchable database to include 63 newcomer programs in addition to a plethora of resources. The researchers clearly state that the new database is not a random sampling of newcomer programs, but instead the selected newcomer programs were invited to participate in

the survey. Based on experience in the field, Short and Boyson (2012) articulate that this national survey is not all encompassing, but the newcomer programs that decided to participate in the updated database are representative of middle and high school programs across the United States.

Over the last ten years, the number of newcomer programs opening and closing, reflects the shifting trends in the immigrant population in the United States. In 2000, the following states had newcomer programs: Alaska, Connecticut, Florida, Georgia, Maryland, Missouri, Nevada, New Mexico, Pennsylvania, Utah, Washington, Wisconsin, and the District of Columbia (Short & Boyson, 2012). In the 2008 to 2011 survey, Short and Boyson (2012), reported that these thirteen states no longer had newcomer programs, or chose not to respond. The upward trend is for immigrant settlement in non-traditional ports of entry states. The following seven states did not have newcomer programs in 2000, but have now established newcomer programs: Arkansas, Kentucky, North Dakota, Rhode Island, South Carolina, Tennessee, and Wyoming. Texas and New York have the highest number of newcomer programs at the secondary level with 9 and 10 respectively.

Newcomer program entry and exit criteria.

The school district participating in this study has an intake center or a registration center. This center often serves as an access point for English language resources like ELL, bilingual, and newcomer programs. During the registration process for new students, parents complete a Home Language Survey. If parents specify a language other than English is spoken in the home, the student is given an English language proficiency assessment for placement purposes according to language ability. Short and Boyson (2012) point out that enrollment of refugee

newcomers is often supported by staff from refugee resettlement agencies. The same researchers report eighty-nine percent of newcomer programs in their 2012 survey indicate that a student's immigration status as a recent arrival is the principle factor for program entrance.

While the newcomer program entry criteria are reasonably standardized (Short & Boyson, 2012), the newcomer program exit criteria fluctuate substantially according to newcomer model, length of stay conditions, and resources available. Some newcomer programs are organized to accommodate students for only one year or two years, while others have the necessary monetary and credentialing resources in place to allow students four or five years to graduate from high school, like Columbus Global Academy (Short & Boyson, 2012). Many newcomer programs exit students based on specific benchmark scores on reading proficiency assessments or English language proficiency assessments like ACCESS for ELLs®. Other newcomer programs utilize teacher recommendations and class-based performance to exit students (Short & Boyson, 2012). Still, other newcomer programs exit students based on student capacity and space in the building. These newcomer programs transition students into other secondary programs. Additional measures for exit might include an Overall Composite Score of 2.5 or above on the ACCESS for ELLs® assessment. Also included in the exit criteria for the district in Kentucky is language growth at the 40th percentile or above on the ACCESS for ELLs® assessment (ESL Office, 2014).

Newcomer students.

The 10,899 students enrolled in the 63 newcomer programs in Short and Boyson's 2012 publication, represented more than 90 countries, speaking more than 55 languages. The six most common languages were Spanish (in 90 percent of the programs), Arabic (38 percent), Mandarin

(19 percent), French (17 percent), and Karen and Vietnamese (both 14 percent). Their ages ranged from 10 to 21 years old. Over 90 percent of the students qualified for free or reduced lunch. Almost 30 percent of students in newcomer programs had interrupted formal education. Short and Boyson (2012) did not report any findings on the distribution of gender.

Newcomer models.

The three most common newcomer models are a program within a school, a separate site from home or neighborhood school, and a whole newcomer school in itself. The following table displays the number of students and percent of total student population from Short and Boyson's 2011 newcomer data survey.

Table 2: Site Models and the Newcomer Student Population in 2011.

Model	Program		Students	
	n	Percent	*n*	Percent
Within a school	38	60	2679	25
Separate site	15	24	1435	13
Whole school	10	16	6785	62
Total	63	100	10899	100

Although the program within a school is the most conventional model, with 38 schools taking 60 percent of the model share, this type of newcomer program only serves 25 percent of the newcomer student population. Because this newcomer model is housed within a mainstream school, the newcomer students have access to interact with native English speakers throughout

the day, in classes like art, physical education, and technology. Researchers like Feinburg (2000) argue that ELLs need exposure to native language, in this case English, and that schools within a school, are the most advantageous structural design to support this effort. He also argues that the newcomer model within a school model provides authentic opportunities for newcomers to build relationships with teachers and staff while inculcating the new academic and cultural systems in a safe environment.

Another newcomer model is the separate site model. In Short and Boyson's 2011 newcomer survey, this model served the lowest student number, with only 13 percent of the student, and had 15 sites, about 24 percent. A highlighted advantage to this design is that school districts have a separate facility that may have the ability to house more students. In addition, separate site design can serve more local schools, and pool resources under one roof. In half of the separate site programs, the length of enrollment is one year. The remaining separate site schools offer a one year extension of stay depending on the individual student's prior educational background and literacy development (Short & Boyson, 2012).

The whole school program is another newcomer model. Although this type of newcomer model has the least number of schools, whole school programs serve the majority of newcomer students, about 62 percent or 6,785 students. The whole school programs are full, four year high schools expressly designed for newcomer students. Key features of the whole school program are college planning opportunities, internship possibilities, access to Advanced Placement courses, and the ability to take all required coursework for high school graduation. Newcomer students may stay in the whole school program for four years through graduation, but depending on literacy development and graduation requirements, students may stay a fifth or sixth year if needed.

The newcomer academy in Kentucky first opened in 2006 and started with 42 students growing to 200 by the end of the year. Over the last eight years, the population, at times, has grown to over 500 ELL students. Approximately twenty five percent of the students enrolled in this newcomer program are considered to have SLIFE status (G. Snow, personal communication, September 7, 2014). Additional demographic student details include the following descriptors: seventy five percent of students are refugees; ninety percent of students participate in the district's free or reduced lunch program; and students speak over thirty languages. The largest language group is Spanish, which represents less than half the school's overall population. Students enter this newcomer program for one to two school years and then transition to other high schools in the district which offer comprehensive ESL support. The school has nineteen certified teachers that are all Highly Qualified in ESL and in their content areas. An instructional design feature of this school is that teachers share common groups of students and meet in Professional Learning Communities to analyze English language proficiency and as well as academic content proficiency. Although voluntary, many students participate in Extended School Services for additional language and content support, which is offered three days a week and for 100 hours in the summer (G. Snow, personal communication, September 7, 2014).

Short and Boyson (2012) reported the six largest newcomer programs across the United States as the following: Dallas English Language Institute (TX), program within a school, 1,124 students; Columbus Global Academy (OH), whole-school program, 497 students; International Newcomer Academy (TX), separate-site program, 425 students; Multicultural High School (NY), whole-school program, 424 students; The International High School at Lafayette (NY), whole-school program, 340 students; High School of World Cultures (NY), whole-school

program, 300 students. The newcomer program featured as part of this study ended the academic school year 2013-2014 with 502 students (School system data source 1, 2014).

Key components of effective newcomer programs.

One of the overarching goals of newcomer programs is to successfully transition newcomer students to mainstream classrooms, or appropriate post-secondary opportunities (Basting, 2004). Researchers have identified vital tenets for effective newcomer programs. Short, Boyson, and Coltrane (2003) identified three literacy and assessment guidelines for effective newcomer programs. The first guideline was age appropriate literacy materials. Especially in the secondary setting, age appropriate materials demonstrated respect for adolescent language learners while they are working with literacy at lower levels. The second key guideline is implementing and teaching a balanced literacy approach. In an effort to build the five foundational skills of literacy, newcomer programs that focus on phonemic awareness, phonics, vocabulary, fluency, and comprehension are most effective (Reutzel & Cooter, 2007; Reutzel & Cooter, 2008). The last key guideline as outlined by Short, Boyson, and Coltrane (2003) is using a diverse range of assessments to capture student learning, growth, and areas of refinement. The authors suggested the most effective newcomer programs used a combination of student portfolios, standardized tests, technology-driven assessments, and paper-pencil testing.

McLaughlin and McLeod (1996) suggest that effective newcomer programs include native language support in both literacy and content areas. The ability to develop a student's native literacy alongside the development of English literacy has shown to be highly successful (August & Shanahan, 2006; DeCapua & Marshall, 2009; DeCapua & Marshall, 2010; Decapua & Marshall, 2011; Verhoeven, 2011). The two related, significant obstacles for this desired

situation are lack of financial resources from the school district and the limited availability of native language support staff that meet state specific guidelines for licensing. Numerous school districts use paraprofessionals as bilinguals. This native language support structure provides newcomer students the access points to key concepts, critical vocabulary, and can assist in lowering the educational stress levels of some newcomer students.

Basting (2004) further indicated that effective newcomer programs utilize educational strategies that address individual student needs. Newcomer students bring with them the full spectrum of experiences in terms of culture, linguistic ability, literacy development and education (DeCapua & Marshall, 2010; Peregroy & Boyle, 2000; Rong & Preissle, 2009). In addition, Basting (2004) also suggested that targeted, purposeful training through professional development is essential to develop educators, paraprofessionals, and administrators' awareness, understanding, and knowledge base when working with newcomer students.

Newcomer criticism.

Most researchers endorse newcomer programs as positive, student-centered environments that support ELL students with both academic and language support, but other researchers caution the unintended consequences of segregation that newcomer programs can produce (Ellen, O'Regan, Schwartz, & Stiefel, 2001; Feinburg, 2000; McDonnell & Hill, 1993; Olsen, 1996). Newcomer programs are asked to straddle a delicate balance between the complicated factors of creating a positive, caring environment, providing a rich, English language experience, and supplying the appropriate academic content material. Some newcomer programs across the United States receive criticism because of limited academic course offerings. McLaughlin and McLeod (1996) reported that a California survey of schools revealed only a small number of

schools provide ELL students with a full course of academic study. A marked difference exists between a school providing access to academic curriculum and the academic readiness of ELL and SLIFE students. Researchers have stated that because of limited or no formal education, multitudes of ELLs and especially SLIFE student are not prepared for the academic demands of secondary school (DeCapua & Marshall, 2003; DeCapua & Marshall, 2010; Boyson & Short, 2003; Short & Boyson, 2012). McLaughlin and McLeod (1996) suggest a resolution in terms of offering academic, content courses in native language. In school districts with a concentration of same native language speakers, like Spanish, this may be an effective solution. Native language support is a complicated, problematic issue because of availability of native language teachers and the number of languages represented in many schools.

SLIFE students

ELLs face many obstacles both culturally and academically (Boyson & Short, 2003; Short & Boyson, 2012; DeCapua & Marshall, 2010; Cranitch, 2010; Freeman & Freeman, 2002). In a limited amount of time, ELLs must navigate the academic language of content while negotiating potentially different cultural systems (DeCapua & Marshall, 2010). ELLs have varied needs and cannot be placed under one uniform, collective umbrella. These students bring with them the full spectrum of experiences in terms of culture, linguistic ability, literacy development and education (DeCapua & Marshall, 2010; Peregroy & Boyle, 2000; Rong & Preissle, 2009).

English Language Learners (ELLs), particularly SLIFE students, are an at-risk group for academic troubles due to the complicating factors of academic preparedness, limited literacy exposure, access to English language, interrupted or limited formal education, limited

background knowledge, and cultural dissonance (Ibarra, 2001; DeCapua & Marshall, 2010; DeCapua & Marshall, 2011; Freeman & Freeman, 2002; August & Shanahan, 2006). Ibarra (2001) explains cultural dissonance as the potential mismatch of culture and expectations between the United States educational system and the educational systems of ELLs.

To be successful in a Western-style educational system, SLIFE students need more than simple English language instruction. Schools must create a supportive network that has the ability to address the multitude of SLIFE needs (Cranitch, 2010; DeCapua & Marshall, 2010; Chavajay & Rogoff, 2002). Cranitch (2010) has suggested developing programs that target the well-being, cognitive skills, concepts of literacy, and the understanding of the world. DeCapua and Marshall (2010) juxtapose the academic and pragmatic cultural perspectives of SLIFE students and Western-style educational standards.

For the majority of SLIFE students, the path to the United States is through refugee experience (DeCapua & Marshall, 2010; DeCapua & Marshall, 2009). Children in refugee camps have limited access to education, in addition to poor teacher quality and few resources (Burgoyne & Hull, 2007). Because of scant resources in refugee camps, civil unrest, or family situation, numerous SLIFE students come to U.S. schools pre-literate or with limited literacy in a native language (Cranitch, 2010; DeCapua & Marshall, 2010). Other serious threats to stages of development are chronic malnutrition and health problems (Newman, 2005; O'Sullivan, 2006). SLIFE students have often experienced high levels of stress and possibly suffer from post-traumatic stress disorder (PTSD) due to resettlement, natural disasters, and witnessing acts of violence (Unruh, 2011; Lutsig et al., 2004; Miller, Mitchell, & Brown, 2005). The PTSD emotional symptoms of anger, frustration, and difficulty concentrating can adversely impact a child's ability to perform and complete academic responsibilities (Carrion & Hull, 2009).

The research clearly demonstrates the complex challenges of developing literacy in English (August & Shanahan, 2006; DeCapua & Marshall, 2009; DeCapua & Marshall, 2010; Decapua & Marshall, 2011; Verhoeven, 2011). Both ELLs and particularly the SLIFE subgroup face challenges in learning to communicate in English for not only specific purposes, but also digesting and producing academic content in a relatively limited amount of time (Decapua & Marshall, 2010; DeCapua, Smathers, & Tang, 2007; Freeman & Freeman, 2002). Cummins (1979) provided a framework for understanding the timeframe for language acquisition. Basic Interpersonal Communication Skills (BICS) is considered social language and usually takes approximately 2 years. Communicative Academic Language Proficiency (CALPS) is the language of academic and content areas which can take up to 7 years to master. A study by Hakuta, Butler and Witt (2000) supports Cummins (1979) framework, but also illustrated that SLIFE students take even longer to attain this academic language. Collier (1989) offered generalizations informed by research about potential timelines to English language proficiency based on the intersection of age, native language proficiency, and prior educational experiences.

- Immigrants arriving at ages 8 to 12, with at least 2 years of L1 schooling in their home country, take 5 to 7 years to reach the level of average performance by native speakers on L2 standardized tests in reading, social studies, and science when they are schooled exclusively in the second language after arrival in the host country. Their performance may reach national norms in as little as 2 years in mathematics and language arts.
- Young arrivals with no schooling in their first language in either their home country or the host country may take even longer to reach the level of average performance by native speakers on L2 standardized tests: possibly as long as 7 to

10 years in reading, social studies, and science, or indeed, never. Very little longitudinal research has been conducted in this area, however.

- Adolescent arrivals who have had no L2 exposure and who are not able to continue academic work in their first language while they are acquiring their second language do not have enough time left in high school to make up the lost years of academic instruction.
- Without special assistance, these students may never reach the 50th NCE or may drop out before completing high school. This is true both for adolescents with a good academic background and for those whose schooling has been limited or interrupted (Collier, 1989, p. 527).

Cook, Boals, and Lundberg (2011) stated, "given this group's essential heterogeneity, different timelines to proficiency should be expected. Thus, the four to seven year timeline suggested in the literature seems reasonable" (p. 69).

As the number of ELL and SLIFE students entering United States public schools continues to rise, teaching the skills of second language reading acquisition is only one piece of a complicated and complex puzzle. Crantich (2010) believes that effective programs for SLIFE students must address gaps in education, concepts of literacy, cognitive skills, and a culture framework for viewing the world. The educational process for ELL and SLIFE students is time-sensitive, especially for those students coming at the secondary level (Conger, 2008; Cook & Zhao, 2011). Conger (2008) purports that both age of entry and English language proficiency level are critical factors in success at the secondary level. The author's research indicated that the older students enter public schools, the more challenging the task becomes to gain English language proficiency.

The Refugee Experience

An explanation of the refugee experience assists in providing a context that many newcomer ELLs students face in addition to learning English. Through the assistance of Kentucky Refugee Ministries, 2,233 refugees were resettled in Louisville, Kentucky during 2013-2014 (A. Eisenmenger, personal communication, January 30, 2015). Almost half of the world's 28.8 million internally displaced people (IDP) and 10.4 million refugees are children (UNHCR, 2013). Children constitute an extremely vulnerable and at-risk subgroup (Lustig et al., 2004; Fawzi et al., 2009; Ellis et al., 2013). Refugee youth may experience profound stressors like violence, loss, interrupted education, separation from parents or caregivers, resettlement challenges, language barriers, injustice, and post-traumatic stress disorder (PTSD) (Lustig et al., 2004; Fawzi et al., 2009; Ellis et al., 2013). Thousands of these refugee youth enter United States school districts and newcomer programs each year. Many SLIFE students enter American schools with a myriad of socio-emotional needs that combine with academic challenges to form a truly complex situation. With limited mental health programs available through school districts, possible cultural stigma associated with receiving mental health assistance, and the limited number of native language mental health specialists, services may not be reaching the young adolescents that genuinely need support (Westermeyer and Williams, 1986). DiNicola (1998) provided further support for the substantial influence the native refugee's culture has over what aspects of mental health treatment are culturally acceptable or not.

Lustig et al. (2004) described three phases of the refugee experience. The first phase is titled Preflight. In this initial phase, many refugee youth have limited or no access to education. The educational and socially developmental interruptions of Preflight, may cascade into

challenges in later schooling and relationships. During this stressful time, many youth may witness acts of violence. In the second phase, entitled Flight, refugees are displaced from their homes, with millions of refugees transitioning into refugee camps (UNHCS, 2013; Lustig et al., 2004). During Flight, refugees must depend on others for sustenance and basic needs. They may experience a great ambiguity about the future. Separation from parents, caregivers, or family members is not uncommon for many refugee youth. The final phase of the refugee experience is Resettlement. During Resettlement, refugee youth must navigate the nuances, educational systems, values, and cultural systems of both the native culture and the host country. Lustig and others (2004) reported that "refugee children straddle old and new cultures. Due to educational experiences and more rapid language acquisition than parents, they may act as cultural liaisons for older generations" (p. 3).

The combination of the three phases of the refugee experience, the validated potential of suffering from PTSD, and the conditions in the refugee camps paint both a complex and complicated socio-emotional picture for many refugee youth. Lustig and others (2004) asserted that a child's ability to self-regulate is intricately connected to the emotional well-being of the caregivers. The stressors of the refugee experience infiltrate the child's emotional development from all sides. Sommers (2002) reported dismal conditions in which many refugee camps lacked adequate food and water. In nine Sudanese refugee camps in Kenya, the malnutrition of toddlers was reported at a twenty to seventy percent range.

Yehuda (2002) defined post-traumatic stress disorder (PTSD) as the "characteristic of a traumatic event in its capacity to provoke fear, helplessness, or horror in response to the threat of injury or death" (p. 108). Many refugee youth who enter newcomer programs and American schools may suffer from PTSD, whether it is officially diagnosed or not (Short and Boyson,

2013). Duncan (2000) studied 168 Sudanese refugee children living in Kenyan refugee camps. In this group, Duncan noted that nearly all of the children suffered from PTSD, while seventy-five percent expressed moderate to server symptoms. Duncan noted that all children experienced nightmares. Mollica and others (1997) reported seventy-five percent of 12 and 13 year old Cambodian refugees living in a refugee camp on the Thai-Cambodian border experienced PTSD. Rothe and others (2002) described 87 Cuban children and adolescents living in an American refugee camp. The authors used the Post-Traumatic Symptom Disorder Reactive Index (PTSD-RI) to evaluate the Cuban refugee youth. Rothe and others stated that fifty-seven percent suffered from moderate to severe PTSD.

Second language acquisition (SLA)

Theories of SLA have evolved over the past fifty years, with the origins in cognitive theories shifting to include sociocultural theories, and now most recently chaos / complexity theory (Chomsky, 1959; Krashen, 1978; Larsen-Freeman, 2007; Pappamihiel & Walser, 2009). Numerous researchers have identified that no single epistemology on SLA can encapsulate the vastness of language learning (Larsen-Freeman, 2007; Firth & Wagner, 1997; Hall, 1997; Liddicoat, 1997). Larsen-Freeman (2007) suggested a "theoretically balanced approach to the study of SLA – one where both the social and the individual cognitive perspectives to SLA would receive attention" (p. 775).

The linguist Noam Chomsky (1959) introduced the concepts of Language Acquisition Device (LAD) and Universal Grammar (UG). Chomsky believed that at a most basic level, all languages shared common properties and that learning a language was systematic (Chomsky, 1959; Larsen-Freeman, 2007). Chomsky's LAD refers to a structure or set of structures in the

brain that have as their sole purpose, language acquisition. The LAD is described as both a storage area and processing center. Universal Grammar is the innate set of all grammar rules for language. Over time, according to Chomsky, the learner's brain accumulates an operational system of language use rules.

Krashen's Monitor Model (1978) is based on Chomsky's work and remains an influential component in numerous language teacher and ESL preparation programs (Echevarria & Graves, 2007; Spada & Lightbrown, 1999). Krashen's Monitor Model (1978) implies that for language acquisition to occur, the learner must be exposed to comprehensible input, be encouraged to participate in the next stage of the acquisition process, and have weak or low affective filter to allow the input in. Krashen's work is often expressed by the formula $i + 1$, in which (i) represents comprehensible input and ($+1$) represents one step beyond the learner's current level of proficiency. The final piece of the language acquisition process is based on Dulay and Burt's (1977) Affective Filter Hypothesis. Krashen describes the key affective variables as motivation, self-confidence, and anxiety. In the language acquisition environment, the affective variables act to obstruct or enable the delivery of comprehensible input.

Sociocultural theories of SLA are deeply rooted in the work of Vygotsky (1978). Two key concepts that provide the foundation for sociocultural theories of SLA are Vygotsky's Zone of Proximal Development (ZPD) and inter- and intrapersonal transfer. The Zone of Proximal Development is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Inter- and intrapersonal transfer describe social interactions. Social interactions on all levels are internalized to form a personal understanding of meaning in addition to the

realization that those same skills may be applied to the next social interaction. ELLs should have plentiful opportunity for meaningful and engaging social interactions.

Lave and Wenger (1991) investigated five modern-day western and non-western frameworks of formal and informal apprenticeships. In these environments, the same authors discerned that learning is most successful when learners have the combination of full access and are allowed to participate in authenticated ways. Lave and Wenger (1991) introduced the concept of legitimate peripheral participation in communities of practice. Learners at a new task, including language, begin with legitimate peripheral participate, similar to an apprenticeship, and finally move towards full participation. The same authors purported that a prolonged apprenticeship allows learners to not only comprehend the task, but also adopt it as their own (Randall, 2013). This sociocultural theory is important to SLA because the foundation is based on opening gateways for language learners to participate in authentic ways no matter the English language proficiency level.

Although the sociocultural theories of SLA have been part of field of SLA for the last thirty years, they were ushered to the forefront by the seminal work of Firth and Wagner (1997). Firth and Wagner (1997) called for a reconceptualization of SLA to include a balanced approach of cognitive and sociocultural to the study of second language acquisition (Firth & Wagner, 1997; Larsen-Freeman, 2007). In their view, language learning is dynamic and that the previous cognitive SLA theories stated that "we are unable to accept the premises of 'interlanguage' – namely that language learning is a transitional process that has a distinct and visible end" (Firth & Wagner, 1998, p. 91). Hall (1997) supported this new reconceptualization of SLA, describing language development that "originates in our socially constituted communicative practices" (p. 302). In addition, Liddicoat (1997) reinforced Firth and Wagner's perspective stating that the

focus of SLA should be on the learner's ability to use language to create a message (as cited in Larsen-Freeman, 2007, p. 776). Larsen-Freeman (2007) offered the following comparative statement:

> Whereas the cognitivists look to see how linguistic structures are manifest in learners' performance and how learners' performance becomes increasingly accurate, complex, and fluent, socially oriented researchers wish to study instead how language resources are deployed in social situations and how participation changes" (p. 781).

To move away from the cognitive / social debate, Larsen-Freeman (2007) offered yet another perspective to consider, chaos / complexity theory.

Chaos / complexity theory was not originally developed for SLA, but can be applied because the core components include systems that are dynamic, complex, and adaptive (Larsen-Freeman, 2007). The same author stated that "One of the insights gained from applying a more dynamic way of looking at language and its development, therefore, is to see that real-time language processing, developmental change in learner language, and evolutionary change in language are all reflections of the same dynamic process of language usage" (p. 783). Larsen-Freeman (2007) asserted that processes of language acquisition are not successive and systematic, but rather they are concurrent with individual timelines. According to this theory, language learning is never finished, but always progressing. Pappamihiel and Walser (2009) affirmed that language learning as a "complex system" that is "more than grammatically correct sentences put together in speech or print, decoded and re-encoded by others" (p. 135). Pappamihiel and Walser (2009) stated that "We use language as a tool of expression; simply put,

language is the most complex tool in our repertoire of communication tools. It cannot be mastered in a year" (p. 135).

Critical Period Hypothesis (CPH)

Numerous researchers have investigated the notion of a sensitive period or critical period for language acquisition for more than fifty years (Singleton, 2005; Birdsong, 2004; Birdsong 2006; Hakuta, Bialystok, & Wiley, 2003; Hyltenstam & Abrahamsson, 2003). Linguistic theorists have searched for possible explanations between the interconnected relationships amongst biological, cognitive, and maturational factors and the age of second language acquisition (Conger, 2008; Hakuta et al., 2003; Singleton, 2005; Birdsong, 2006). In the literature, the interplay between age and second language acquisition is commonly referred to as the Critical Period Hypothesis (CPH) (Singleton, 2005; Birdsong, 1999; Conger, 2008; Hakuta et al., 2003). Birdsong (1999) offered this definition of the CPH as the following:

> In its most succinct and theory-neutral formulation, the CPH states that there is a limited developmental period during which it is possible to acquire a language, be it L1 or L2, to normal, native-like levels. Once this window of opportunity is passed, however, the ability to learn language declines (p. 1).

Additionally, Conger (2008) contributed that the CPH "posits that the ability to become fully proficient in a second language (often measured by the ability to speak without an accent or follow grammatical rules) is influenced by the developmental period in which exposure to the language begins" (p. 3). The CPH has direct implications for newly arrived ELL and SLIFE students entering the secondary level of the U. S. educational system. Research has shown the

age of entry and English language proficiency level are decisive factors in the academic success of ELL students (Conger, 2008; Cook & Zhao, 2011).

The origins of the CPH are generally credited to Penfield and Roberts (1959). This neuro-linguistic research team deducted that cerebral functions for language learning were not available after a marked critical age (Birdsong, 1999). This critical age span was from 9-12 years old. Lenneberg (1967) furthered developed the research of Penfield and Roberts (1959) to offer an onset age and offset age for CPH, from age 2 to puberty (Birdsong, 1999; Singleton, 2005). According to Lenneberg (1967), after puberty, the language acquisition process demonstrated a prompt decline and that "the incidence of language-learning-blocks' rapidly increases and that foreign languages have to be learned through a conscious and labored effort" (p. 167). From 1959 to 2003, Singleton (2005) chronicled ten separate versions of the CPH proposed by a variety of researchers. Table 3 below is an adapted summary from Singleton (2005).

Table 3: Summary of Proposals for CPH 1959 – 2003

Penfield and Roberts (1959)	Offset: age 9
Lenneberg (1967)	Onset: age 2 Offset: puberty
Molfese (1977)	Offset for phonetics/phonology: age 1
Seliger (1978)	Offset for phonetics/phonology: puberty
Diller (1981)	Offset for phonetics/phonology: age 6-8
Scovel (1988)	Offset for phonetics/phonology: age 12
Johnson and Newport (1989)	Offset of phase 1: age 7 Offset of phase 2: puberty
Long (1990)	Offset of phase 1: age 7

	Offset of phase 2 for phonetics/phonology: age 12 Offset of phase 2 for morphosyntax: age 15
Ruben (1997)	Onset for phonetics/phonology: 6th month of fetal life Offset for phonetics/phonology: age 1 Offset for syntax: 4th year of life Offset for semantics: 15th/16th year of life
Hyltenstam and Abrahamsson (2003)	Offset: shortly after birth

Hyltenstam and Abrahamsson (2003) acknowledge that the general disagreement amongst linguistic researchers and CPH involves the interpretation of Lenneberg's (1967) seminal work. These interpretations can be categorized into three principal tenets. The first interpretation upholds Lenneberg's (1967) assertion that language learners can reach native-like proficiency from exposure to the target language, if this experience happens before puberty. The second tenet considers the situation that contradicts the CPH, in that adult language learners outperform younger language learners on language performance tasks. The third interpretation states that younger language learners tend to perform superiorly at any stage of language learning.

A study by Johnson and Newport (1989) used a grammaticality judgment test to evaluate the CPH. The study concentrated on forty-six native speakers of Korean and Chinese who had Age of Arrival (AoA) ranging from three to thirty-nine years, including at least five years of exposure to English and at least three years of uninterrupted residency. The study also indicated that all forty-six subjects had some schooling in the United States, as well as all forty-six subjects were university faculty or students (Johnson & Newport, 1989). Johnson and Newport (1989) reported a significant correlation between AoA and grammaticality judgment scores ($r = -.63$, $p < .001$). Birdsong and Molis (2001) closely replicated the work Johnson and Newport

(1989), but the subjects were sixty-one native Spanish speakers. Twenty-nine were early arrivals with ages less than sixteen, while the other thirty-two were considered late arrivals with age older than seventeen. Mirroring Johnson and Newport (1989), all sixty-one subjects held at least a bachelor's degree, and all sixty-one subjects were university faculty, students, or employees at "major U. S. universities (Cornell University, University of Virginia, University of Illinois, or University of Texas at Austin)" (Birdsong & Molis, 2001, p. 5). On the same grammaticality judgment, Birdsong and Molis (2001) found that early arrivals, age and correlation of scores was not significant ($r = -.24$, $p = .22$). For late arrivals, the correlation was strongly negative ($r = .69$, $p < .0001$). As of 2006, Birdsong stated that more than twenty studies investigated "the rate of nativelikeness among late (AoA $\geq$ 12 years) L2A leaners. In these studies, the incidence of nativelikeness ranges from 0% to 45.5%" (p. 20).

Birdsong (2006) developed three basic patterns to represent the interaction between age function and language acquisition. The first pattern depicts a sharp decrease at the age of acquisition. Vanhove (2013) describes this first pattern as "a steep decline of the age of onset of acquisition – ultimate attainment function up to the end of the Critical Period and a practically non-existent age effect thereafter" (p. 3). Birdsong (2006) describes the second pattern as "unconventional, although often implicitly invoked" (p. 17). The right side of the pattern is an "age gradient" (Birdsong, 2006, p. 17). This "age gradient" represents the decline in ultimate attainment with increasing age of acquisition, which is not bounded. Birdsong (2006) explains that the left side, which is bounded, and flat as a "window of opportunity" (p. 17). This span is time sensitive and learning potential is at its highest. The third pattern characterizes two finite periods, closely resembling a "stretched Z" (Birdsong, 2006, p. 17). This third pattern incorporates characteristics of the previous two. The left side represents is a bounded period in

which "age effects are absent, as there is no downward slope in the age function" (Birdsong, 2006, p. 17). The middle section depicts a bounded declining slope. The final section is a "flattening of the age function" (Birdsong, 2006, p. 17). Figure 1 below is a visual representation of Birdsong's (2006) graphs on Critical Period effects.

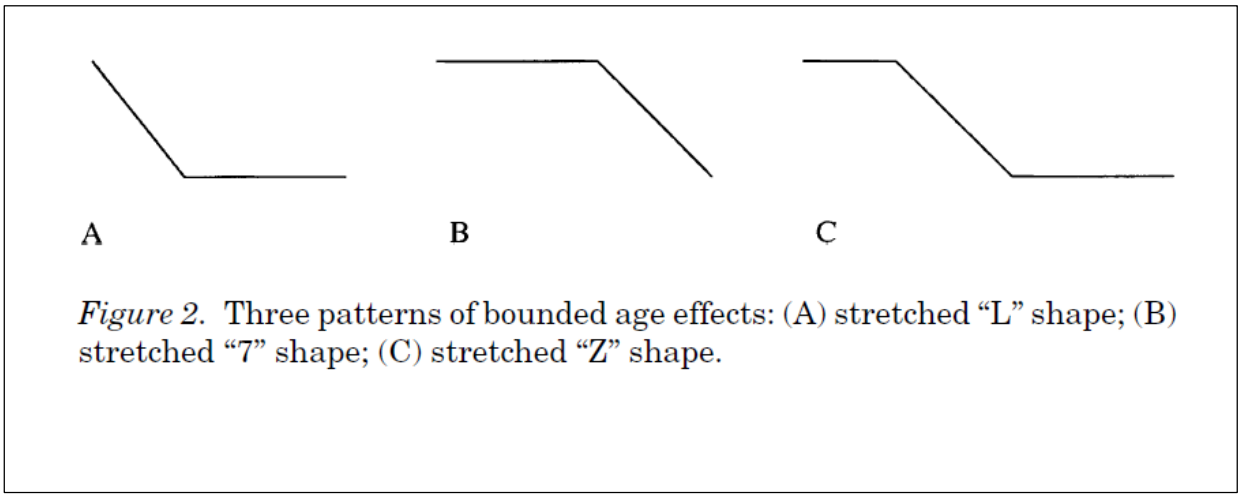


Figure 2. Three patterns of bounded age effects: (A) stretched "L" shape; (B) stretched "7" shape; (C) stretched "Z" shape.

Figure 1 Adapted from Birdsong (2006)

Researchers have offered potential underlying factors that influence the CPH. Conger (2008) discusses non-developmental factors that may affect the rate of second language acquisition. Conger (2008) references the educational backgrounds of ELL parents. English language proficiency levels for ELLs of college educated parents are typically higher (Portes & Schauffler, 1994; Bialystock & Hakuta, 1994; Hakuta, Butler, & Witt, 2000). Conger (2008) also discusses the non-developmental factors of quality of schools for ELLs and the English language acquisition process. Conger (2008) states, "if older-EL students enter lower quality schools or receive lower quality English language instruction than young-EL students, then their rate of English acquisition will be slower and their likelihood of becoming proficient will be lower (p. 4). Hakuta and others (2003) contributed the following quote about social factors and CPH:

> Among social factors, education has been most clearly demonstrated to influence second-language acquisition. Learners who arrive as immigrants at different ages have fundamentally different experiences, are exposed to qualitatively and quantitatively different samples of the new language, and have distinctly different opportunities for formal study either of the language itself or through the language into other educational content (p. 5)

Other researchers have indicated that CPH is strongly influenced by levels of L1 proficiency. The more developed the L1 system is, the greater the chances an ELL student can draw on strengths to influence L2 learning (Flege, Yeni-Komshian, & Liu, 1999).

For this study, the factors that strongly influence the notion of a Critical Period for high school ELL students are English language proficiency level, age, prior educational experience, and time (DeCapua & Marshall, 2009; DeCapua & Marshall, 2010; Conger, 2008; Cook & Zhao, 2011; Hakuta et al., 2003; Birdsong, 2006). Secondary ELL students who enter the large, urban district in this study represent a full continuum of educational experiences, from formal education and advanced native literacy skills to no formal education and non-literate in native language. Approximately twenty-five to thirty percent of the high school ELL students in this study are considered SLIFE students, in addition to thirty-eight percent qualifying for refugee status (ESL Department, School system data source 1, 2014). Although there remains contention on the exact interpretation of the CPH and what constitutes English language proficiency, this study utilizes the statistical approach of survival analysis to examine timelines to English language proficiency on the ACCESS for ELLs® assessment.

History and Development of ACCESS for ELLs®

Test Purpose.

Assessing Comprehension and Communication in English State-to-State for English Language Learners is the acronym for the ACCESS for ELLs® assessment. This annual, standards-based assessment was first developed by the World-class Instructional Design and Assessment (WIDA) Consortium (Fox & Fairbairn, 2011; WIDA, 2014).

> The overarching purpose of the ACCESS for ELLs® is to assess the developing English language proficiency of English language learners in grades K-12 in the United States following the *English Language Proficiency (ELP) Standards for English Language Learners in Kindergarten through Grade 12* of the multi-state World-class Instructional Design and Assessment (WIDA) Consortium. (Yanosky, Amos, Cameron, Louguit, MacGregor, Yen, & Kenyon, 2013, p. 16)

The test was created to evaluate both the social and academic language proficiency of ELL students. It measures English language across the four language domains of speaking, listening, writing, and reading in the content areas of language arts, mathematics, science, and social studies. In the latest *Annual Technical Report No. 8 Series 203 2011-2012 Volume 1,* Yanosky and colleagues (2013) identified the other major purposes for ACCESS for ELLs® as the following:

- Identifying the English language proficiency level of students with respect to the WIDA ELP Standards used in all member states of the WIDA Consortium
- Identifying students who have attained English language proficiency
- Assessing annual English language proficiency gains using a standards-based assessment instrument

- Providing districts with information that will help them evaluate the effectiveness of their ESL/bilingual programs and determine staffing requirements
- Providing data for meeting federal and state statutory requirements with respect to student assessment
- Providing information that enhances instruction and learning in programs for English language learners. (p. 16)

In 2004, WIDA field tested ACCESS for ELLs® in eight states to 6,662 ELL students (WIDA, 2014). WIDA reported that in the school year 2013-2014, ACCESS for ELLs® was administered to 1,372,611 ELL students in 33 states (WIDA, 2014).

Theoretical Basis for ACCESS for ELLs®.

The theoretical foundation for the ACCESS for ELLs® assessment stemmed from the development of English language proficiency standards. In 2003, the WIDA Consortium created the *WIDA English Language Proficiency Standards for English Language Learners in Kindergarten through Grade 12* (Gottlieb, 2004). The aforementioned English language proficiency standards were scripted from the current research in the fields of second language acquisition and linguistics (Bauman, Boals, Cranley, Gottlieb, & Kenyon, 2007). The WIDA English Language Proficiency Standards provided the cornerstone for the ACCESS for ELLs® assessment. In 2012 WIDA revised the English Language Proficiency Standards to align with the Common Core. (WIDA Consortium, 2012). WIDA renamed them the English Language Development Standards. Table 4 lists the WIDA English Language Development Standards.

Table 4. WIDA English Language Development Standards

Standard	Description

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

(WIDA Consortium, 2012)

Bauman and others (2007) employed the seminal work of Cummins (1981) to provide a framework for not only understanding the timeframe for language acquisition, but also that language learning was a continuum-based development. Basic Interpersonal Communication Skills (BICS) is considered social language and usually takes approximately 2 years. Communicative Academic Language Proficiency (CALPS) is the language of academic and content areas which can take up to 7 years to master. A study by Hakuta, Butler and Witt (2000) supported Cummins' (1981) framework, but also illustrated that SLIFE students take even longer to attain this academic language.

The research team at the WIDA Consortium expanded the theoretical foundation of the ACCESS for ELLs® to include not only a continuum based language proficiency growth process, but also an academic language proficiency component (Bauman et al., 2007; Bailey & Butler, 2002; Scarcella, 2003). WIDA developed "a model of academic language proficiency to guide the formulation of the WIDA Standards and their accompanying model performance indicators" (Bauman et al., 2007, p. 82).

Organization of the WIDA ELD Standards.

Four of the five WIDA ELD Standards reflect the language associated with the content areas of language arts, mathematics, science, and social studies. The fifth WIDA ELD Standard reflects the language used for social and instructional language in school settings. Although as stated, the WIDA ELD Standards are written at a nonconcrete level, it is through the five of the six proficiency levels that language proficiency becomes more concrete. Bailey and Huang (2011) described "it is at the intersection between domains and proficiency levels that specificity is offered for the kinds of language demands placed on students by each of the five standards" (p. 357). The main proficiency levels include the following: *Entering*, *Emerging*, *Developing*, *Expanding*, *Bridging*, and *Reaching* (Yanosky et al., 2013). The highest proficiency level of *Reaching* is not used within the WIDA ELD Standards, but is designated for fully English proficient status (Bailey & Huang, 2011; Yanosky et al., 2013).

According to Yanosky and others (2013), the WIDA ELD Standards have **performance definitions** that provide a "global overview of the stages of the language acquisition process" (p.18). The performance definitions are based on the following three criteria:

> The first is students' increasing comprehension and production of the technical language required for success in the academic content areas. The second criterion is students' demonstration of oral interaction or writing of increasing linguistic complexity. The final criterion is the increasing development of phonological, syntactic, and semantic understanding in receptive skills or control in usage in productive language skills. (Yanosky et al., 2013, p.18)

The performance definitions accompany the **performance indicators** (PIs) for each language proficiency level. In previous *WIDA Technical Reports* and other publications, these performance indicators were known as *Model Performance Indicators* (MPIs) (Bailey & Huang, 2011; Yanosky et al., 2013). Yanosky and others (2013) noted that the PIs "describe the expectations for ELL students for each of the five Standards, at five different grade-level clusters, across four language domains, and at the five language proficiency levels" (p. 18). The grade-level clusters are pre-K-K, 1-2, 3-5, 6-8, and 9-12. The succession of the five PIs reflect a cogent sequence from low English language proficiency to full English proficiency. The clustering of five PIs in a rational sequence is referred to as a strand (Yanosky et al., 2013). ACCESS for ELLs® is founded on the 80 strands, encompassing 400 individual PIs, all of which originated from the WIDA ELP Standards (Yanosky et al., 2013). Bauman and others (2007) stated that in "the initial forms of ACCESS for ELLs®, there has been a 1:1 correspondence of test items to the performance indicators for each standard in WIDA's large-scale framework. With this clear match, construct validation has been built into the test" (p. 82).

Test features of the ACCESS for ELLs® assessment.

Kenyon and colleagues (2011) stated "the goal of WIDA ACCESS for ELLs® is to operationalize WIDA's English Language Proficiency Standards in an English language proficiency assessment" (p. 386). The ACCESS for ELLs® has a complex design utilizing grade level clusters, English Language proficiency levels, and an overlapping tier system to form both horizontal and vertical dimensions (Fox & Fairbairn, 2011; Yanosky et al., 2013). The five grade level clusters are Kindergarten, grades 1-2, 3-5, 6-8, and 9-12. The main five English language proficiency levels are *Entering* (Level 1), *Emerging* (Level 2), *Developing* (Level 3), *Expanding* (Level 4), and *Bridging* (Level 5) (Yanoksy et al., 2013). The integration of the

grade level clusters and the English language proficiency levels represent the horizontal dimension of the assessment (Fox & Fairbairn, 2011; Yanosky et al., 2013). An overlapping, tri-leveled tier system (Tier A, Tier B, and Tier C) was developed as the vertical dimension to the assessment (Fox & Fairbairn, 2011; Yanosky et al., 2013). The three tenet tier system indicates the range of English language proficiency within the grade clusters and amongst the four domains of speaking, listening, reading, and writing (Fox & Fairbairn, 2011). Fox and Fairbairn (2011) stated "the vertical dimension (or scaling) allows test users to assess finer-grain differences in student performance as students move across tiers both within or across grade level clusters" (p. 427). Below, Figure 2 represents a graphical summary of the ACCESS for ELLs® Tier system.

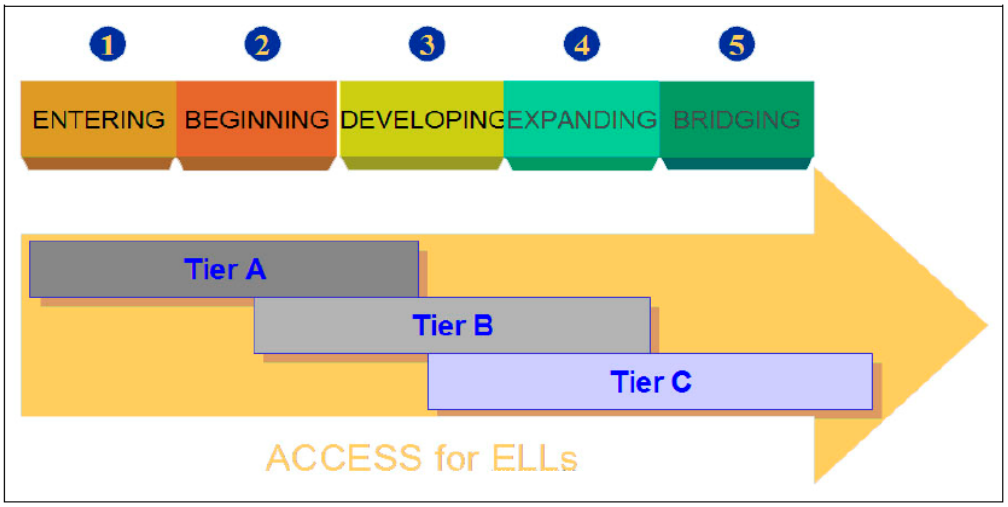


Figure 1. Tier framework for ACCESS for ELLs® (Yanosky et at., 2013).

ACCESS for ELLs® is designed as an overlapping assessment in which ELL students have the opportunity to navigate through the progression of the English language proficiency levels. For example, Tier A represents a range from lowest English language proficiency of *Entering* to

Developing. This intentional design "ensures that all of the PIs from the WIDA ELD Standards appear on the assessment" (Yanosky et al., 2013, p. 19). The overlapping framework allows for all English language proficiency levels to be covered in one assessment. Yanosky and others (2013) provided additional rationale:

> The overlap ensures that the assessment is *horizontally equated*; that is, common items and tasks across tiers ensure that each tier is measuring to a common language proficiency scale. Thus, a test booklet at any given tier is primarily composed of items and tasks that span three targeted proficiency levels. (p. 20)

The ACCESS for ELLs® assessment assesses English language proficiency in the language domains of listening, reading, speaking, and writing. The format of the tests varies within each language domain. The Listening and Reading assessments are multiple choice in design, while the Speaking and Writing portions are extended constructed response (Kenyon et al., 2011). The multiple choice Listening and Reading portions of the assessment may include text, graphics, or both (Bauman et al., 2007). The Speaking and Writing portion of the assessment are performance-based tasks that are evaluated with respective rubrics (Bauman et al., 2007). The Listening, Reading, and Writing assessments may be administered by group, while the Speaking test is designed as an individually adaptive, interview-style, question and response format. The overall test administration time per student is estimated at 2.25 hours (Bauman et al., 2007)

The test developers of the ACCESS for ELLs® assessment intentionally added graphical elements to support ELLs across the four domains of listening, reading, writing, and speaking. Bauman and others (2007) stated that "graphics are intended to reduce the potentially confounding influence of whatever linguistic channel is used to present the task context by

opening a visual channel to frame that context" (p. 84). The same authors argued that the addition of the graphical support created opportunities to provide the necessary background information for SLIFE students. The graphical features also offset the distinct advantage some ELLs have with formal educational background. The final reason for graphical support is to provide various avenues for the ELL student to produce a correct response. Bauman and others (2007) added "this notion ties importantly to our contention that ACCESS for ELLs® does not test individual skills or mechanical processing abilities, but tests language proficiency in a more comprehensive sense" (p. 84).

One of the unique design features of the ACCESS for ELLs® assessment is the manner in which the test items are developed. The test items go through a multi-stage process. First, 20 to 22 teachers or administrators from WIDA Consortium states participate in a course to study the foundational components of the test structure. The group of 20 to 22 teachers or administrators in each grade level band draft potential test items in all four language domains. Next, the test items go through two formal in-house reviews and edits. The reviews are designed to examine content and bias with a second set of teachers evaluating the items. The second review ensures that each test item reflects the WIDA Standards and its Performance Indicator (PI) (Yanosky et al., 2013). In addition, Fox and Fairbairn (2011) indicated that the staff of CAL (Center for Applied Linguistics), the non-state entity of the WIDA Consortium, both review and refine the test items. Bauman and others (2007) describe the technical approach used to analyze the test items as follows:

> Ultimately, the Rasch measurement model, upon which the test is built, is used for the empirical analysis of the quality of test items following piloting and field testing. At the item level, Rasch mean square infit and outfit statistics are examined to ensure only items

> that fit the Rasch measurement model (i.e., measure the same construct) are included in the operational test forms. (p.85)

Each year, the ACCESS for ELLs® assessment is reviewed for differential item functioning (DIF) to draw attention to test items that may need to be replaced. Examples of differential item functioning include gender and ethnicity (Bauman et al., 2007). Yanosky and others (2013) reported that out of 270 Listening items only 3 (1.1 percent) reported a DIF on ethnicity and one DIF based on gender. The same authors reported that out of 344 Reading items, only 3 (0.9 percent) reported a DIF associated with ethnicity and none on gender.

The ACCESS for ELLs® assessment generates two scores, a scale score and a language proficiency score. Scores are reported for each of the language domains. Additionally, four composite scores are reported in the following categories: Oral language (based on achievement in Listening and Speaking); Literacy (based on achievement in Reading and Writing); Comprehension (based on achievement in Listening and Reading); and Overall (based on achievement in all four domains) (Yanosky et al., 2013). The Oral language and Literacy composite scores are based on equal weighting between the four language domains. The composite score for Comprehension is based on 70 percent Reading plus 30 percent Listening. The Overall Composite Score is based on 35 percent Reading plus 35 percent Writing plus 15 percent Listening plus 15 percent Speaking (Yanosky et al., 2013).

The designers of the ACCESS for ELLs® assessment employed the idea of scaling and equating to provide meaningful results (Yanosky et al., 2007; Kenyon et al., 2011). Raw scores are converted into scale scores. Scaling is the process of not only reporting scores on a standard scale, but also maintaining the same meaning whenever it is used (Yanosky et al., 2013).

Yanosky and others (2013) define equating as placing all of the given tests on the same scale. The advantage of equating is that the outcomes are comparable, regardless of the specific test. Scale scores range from 100-600. The centering value is set at 350, with a lower bound of 100 (250 below the center point) and an upper bound of 600 (250 above the center point).

One of the challenges of a multiple-leveled assessment like ACCESS for ELLs® is how to make scores comparable across forms (Tier A, Tier B, Tier C) and grade levels (Kenyon et al., 2011). Kenyon and others (2011), as well as Yanosky and others (2013) recommend using a common scale score. This technique allows growth to be measured. Kenyon and others (2011) defined vertical scaling as "the process used for associating performance on each test level on a single score scale" (p. 385). Utilizing this approach, student progress can be measured across the grade levels K-12. The ACCESS for ELLs® assessment also offers a horizontal equating element because of the equating process across the three Tiers (Yanosky et al., 2013).

In addition to scale scores, the ACCESS for ELLs® assessment reports language proficiency scores. Language proficiency scores and scale scores differ in a number of ways. Language proficiency scores are grade dependent and are not designed to be continuous across grades (Yanosky et al., 2013). They are based on a student's cut score in each of the language domains and composite designs. Language proficiency scores are reported as a two-digit decimal number, with the first number revealing the ELL student's overall English language proficiency level (1 to 6). The decimal indicates the distance between cut scores. Yanosky and others (2013) advised that language proficiency scores cannot be used as interval scores. Within the same grade level, the scores are interval, but do not create an interval scale across language proficiency levels. For example, a score interval within grade 3 from language proficiency level 4.1 to 4.2 represents the same interval as from 4.6 to 4.7 (Yanosky et al., 2013).

Validity and reliability.

Shadish, Cook, and Campbell (2002) define validity as "the approximate truth of an inference" (p. 34). The WIDA research team has attempted to gather evidence from multiple perspectives to not only create, but continually modify the ACCESS for ELLs® assessment to intentionally match the inference that the assessment was designed to measure the developing English language proficiency of ELLs according to the *WIDA English Language Proficiency (ELP) Standards for English Language Learners in Kindergarten through grade 12* (Yanosky et al., 2013).

In 2005, the WIDA Consortium conducted a bridge study to compare the ACCESS for ELLs® assessment with four older English language proficiency assessments. This study was specifically designed to evaluate the concurrent validity of the ACCESS for ELLs® assessment. Yanosky and others reported that the "concurrent validity entails investigating a new test's relationship to others tests that purport to measure a similar construct" (p. 45). The four older tests were the *Language Assessment Scales* (LAS), the *IDEA Proficiency Test* (IPT), the *Language Proficiency Test Series* (LPTS), and the *Revised Maculaitis II* (MAC II) (Bauman et al., 2007). In the spring of 2005, within a six-week window, 4,985 kindergarten through grade 12 students participated in the bridge study. The students were from school districts in Illinois and Rhode Island. Bauman and others (2007) indicated that:

> The study also allowed us to investigate the strength of the relationship between the new ACCESS for ELLs® test and four tests of English language proficiency – a criterion-related validity question. As all five tests claim to measure developing English language proficiency, we expected significant correlations between student performance on

> ACCESS for ELLs® and the other tests of English language proficiency. On the other hand, ACCESS for ELLs® was developed with a different intent; that is, to assess the English proficiency needed to succeed academically in U. S. classrooms based on clearly defined English language proficiency standards. (p. 89)

The same authors expected moderate correlations for two reasons. The first reason was if ACCESS for ELLs® correlated strongly with the other four, the assessment could be viewed as simply another English language proficiency assessment. Additionally, as the quote suggested, ACCESS for ELLs® was developed with narrower focus. The second reason was if ACCESS for ELLs® correlated too low, the assessment could be viewed as measuring unrelated concepts (Bauman et al., 2007). Overall, the bridge study reported moderate to high correlations between the four English language assessments and the ACCESS for ELLs® assessment. Table 5 presents average correlations between these four assessments and the ACCESS for ELLs® assessment.

Table 5: Average Correlations (Bauman et al., 2007).

Test	Listening	Speaking	Reading	Writing
IPT	0.614	0.627	0.658	0.629
LAS	0.514	0.570	0.643	0.561
LPTS	0.610	0.644	0.765	0.707
MAC II	0.468	0.508	0.582	0.545

Bauman and colleagues (2007) argued that the moderate to strong correlations both illustrated and supported that the ACCESS for ELLs® assessment can appropriately categorized as an English language proficiency assessment. The same authors extended the argument to include the lack of high correlations was an indication that the ACCESS for ELLs® measured the concept of English language proficiency in a distinct manner and was "not interchangeable with the older-generation tests" (p.89). In addition, the results of the bridge study demonstrated the external validity of the ACCESS for ELLs® assessment compared to other English language proficiency assessments (Bauman et al., 2007; Yanosky et al., 2013).

The WIDA research team also examined the reliability of the ACCESS for ELLs® assessment. Based on data from the first operational form of the ACCESS for ELLs® assessment, *Technical Report No. 1*, Kenyon (2006) described the reliability of the overall composite scores using a stratified Cronbach alpha coefficient. For kindergarten, the coefficient was .930; for grades 1-2, .949; for grades 3-5, .941; for grades 6-8, .933; and for grades 9-12, .936.

The *Annual Technical Report No. 8* reported intercorrelations between the Overall composite scores in the four domains of speaking, reading, writing, and listening (Yanosky et al., 2013). The Overall composite score is a weighted composite of scale scores through the four domains. As aforementioned, the ACCESS for ELLs® is vertically scaled, so it is possible to compare scores across grade levels (Yanosky et al., 2013; Kenyon et al., 2011). The most recent ACCESS for ELLs®, *Series 203*, was administered to 966, 723 students (Yanosky et al., 2013). Below is Table 6 describes the intercorrelations between the scale scores across the four language domains.

Table 6: Intercorrelations between scale scores and language domains, Series 203, (n = 966, 723)

	Listening	Speaking	Reading	Writing
Listening	1	.662	.799	.783
Speaking	.662	1	.596	.575
Reading	.799	.596	1	.895
Writing	.783	.575	.895	1

(Yanosky et al., 2013).

The intercorrelations table demonstrated a range from a high of .895 between Reading and Writing to a low of .575 between Writing and Speaking. The same authors indicated expected evidence of strong correlations between literacy skills sets like Reading and Writing and oral skills like Listening and Speaking. An additional strength of the ACCESS for ELLs® is that the assessment is vertically scaled, so that it is possible to compare scale scores across the grades levels, from kindergarten to grade twelve (Kenyon et al., 2011; Yanosky et al., 2013).

A study by Parker, Louie, and O'Dwyer (2009) examined how the English language proficiency assessment, ACCESS for ELLs®, would relate to the high-stakes, state content assessment, the New England Common Assessment Program (NECAP). The study investigated how the English language proficiency domains of reading, writing, speaking, and listening compared to reading and writing on the NECAP. The authors hypothesized that higher English language literacy scores on ACCESS for ELLs® in reading and writing would predict higher reading and writing scores on NECAP than the oral skills of speaking and listening (Parker et al., 2009). The authors used multilevel regression models to evaluate the data. In 5th grade students, ACCESS for ELLs® reading domain scores explained 30 percent of the variance in NECAP

reading scores. The ACCESS for ELLs® reading domain scores explained 23 percent of the variance for 8th grade students. In 5th grade students, ACCESS for ELLs® writing domain scores explained 28 percent of the variance in NECAP writing scores, while 25 percent of the variance for 8th grade students. Yanosky and others (2013) stated that "the results also provide evidence that ACCESS for ELLs® is testing the academic English proficiency needed to succeed in mainstream classrooms" (p.49).

Chapter 3: Methodology

Introduction

Under current federal policy, the No Child Left Behind Act of 2001 (NCLB, 2001) characterizes ELLs as a unified, homogenous group, but research suggests that students enter the United States public school systems with a wide range of educational backgrounds and life experiences (DeCapua & Marshall, 2010; Peregroy & Boyle, 2000; Rong & Preissle, 2009; Freeman & Freeman, 2002; Abedi & Dietel, 2004; Conger, 2008; Cook & Zhao, 2011). The No Child Left Behind Act (NCLB, 2001), mandates that all ELL students are to be assessed in both academic content knowledge and academic English language proficiency. Kentucky is a member of the WIDA Consortium, therefore, the large, urban school district in this study uses WIDA's ACCESS for ELLs® to measure English language proficiency as required by NCLB.

Research suggests that the English language proficiency growth trajectories for many ELL students are strongly correlated with their initial English language proficiency levels (Cook & Zhao, 2011; Conger, 2008). Conger (2008) examined how the age of entry into public schools affected the time to English language proficiency. The results of this study suggested that just over fifty percent of students gained English language proficiency after three years (Conger, 2008). According to the same study, the students that did not typically gain English language proficiency were students who entered public schools older and with a lower English language proficiency level. Schools that serve large populations of older-entry ELLs may be at a disadvantage as well (Conger, 2008). Conger (2008) stated the following:

> The results speak directly to the federal No Child Left Behind Act, which places a three year time limit on exemptions from standardized exams for new EL students. For the

> majority of students, this one-size-fits-all policy may be fair, assuming that a minimum level of English proficiency is sufficient to take an exam of academic proficiency. Yet for students who enter at an older ages and who may be biologically or cognitively constrained in their ability to learn English, irrespective of their families' human capital or the schools they attend, this policy may put them at a disadvantage (p. 28).

Based on the No Child Left Behind Act (2001) assessment guidelines for ELLs, the Department of Education in Kentucky only grants a one year exemption, or 240 cumulative days, from both state and federal accountability assessments. Schools that serve large numbers of ELLs with low English language proficiency levels may not reach Annual Measurable Achievement Outcomes (AMAOs). If the federal accountability framework fails to carefully examine English language proficiency levels, both states and federal educational frameworks risk misjudging expected English language proficiency timelines.

The principal question governing this study is "What is the likelihood that all high school ELL students in English language instructional programs will attain English language proficiency on the ACCESS for ELLs® assessment prior to graduation?" The methodological approach used is a survival analysis. Survival analysis is "a statistical method used to ascertain the time required for a particular event to occur" (Zhao & Cook, 2011, p. 10). In the current study, survival analysis investigates the length of time ELL students at varying English proficiency levels require to reach a pre-determined English proficiency level according to the WIDA standards in the selected state.

Research Questions

The objective of this study was to evaluate the timelines to English language proficiency for high school students new to ESL instructional programs in a large urban school district. The research questions guiding the study are:

1. What is the likelihood that all high school ELL students in English language instructional programs will attain English proficiency on the ACCESS for ELLs® assessment prior to graduation?
2. Does success rate (attaining English language proficiency) on the ACCESS for ELLs® assessment vary by language or language group?

It is hypothesized that most high school ELL students will not exit LEP (Limited English Proficient) status in four years or less. In addition, it is hypothesized that not all language groups will demonstrate English language proficiency timelines at the same rate.

Study Context

ELL students in Kentucky participate annually in the ACCESS for ELLs® assessment. According to the Department of Education in Kentucky, the ACCESS for ELLs® testing window is a six week window, starting on January 1 of the calendar year. For this study, the researcher entered into a collaborative effort with the large, urban district's Department of Data Management, Planning, and Program Evaluation to not only ensure sensitivity of data collection, but also the verification process of using reliable data.

The data for this study are ELL students' most recent ACCESS for ELLs® assessment Overall Composite Scores from the school years 2009 – 2010, 2010 – 2011, 2011 - 2012, 2012 - 2013, and 2013 – 2014. This study used extant data sets from the school years 2009 – 2010, 2010 – 2011, 2011 – 2012, 2012 – 2013, and 2013 – 2014 school years available through an

open records request from the school district in Kentucky. State student identification numbers were initially used to match ACCESS for ELLs® Overall Composite Scores for each of the school years previously mentioned. Crocker and Algina (1986) stated that combining items or subsets of items to construct a composite score results in higher reliability. After the matching procedures, the state student identification numbers were eliminated from the data sets. Table 7 below represents the initial proficiency level placement of ELL students in Grades 9, 10, 11, and 12 at the high school level in the large, urban district.

Table 7: Initial Proficiency levels for high school ELLs in the Large, Urban District by Year

Initial Proficiency Level	Counts of Students by School Year				
	SY 2009-2010	SY 2010-2011	SY 2011-2012	SY 2012 - 2013	SY 2013 – 2014
Level 1: 1.0 - 1.9	44	58	46	91	63
Level 2: 2.0 - 2.9	145	139	160	155	174
Level 3: 3.0 - 3.9	193	201	251	283	254
Level 4: 4.0 - 4.9	144	189	163	187	228
Total	526	587	620	716	719

Description of Sample

The data for this study was gathered from 14 high schools from school years 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014. The ELL students represent grade 9 through grade 12. The growth in the number of native languages spoken across elementary, middle and

high has increased from 76 in 2004 – 2005 to 117 in 2013 – 2014 (ESL Department, 2014). The *N* for this study is 1878 with 73 languages represented (see Table 8).

Table 8: ELL student demographics.

ELL student demographics				
	N	Number of high schools	Total Number of languages spoken	Information Unavailable languages
Sample	1878	14	73	256

Key Variables

Independent Variable.

Two independent variables, time and native language, are at the center of the study. The 2011 American Community Survey, conducted by the U. S. Census Bureau, reported that 60.6 million people aged 5 and over spoke a language other than English at home (Ryan, 2013). This represented approximately 21 percent of this population. Ryan (2013) stated that from 1980 to 2010, there was a 158.2 percent increase in the number of people who spoke a language other than English at home and a 232.9 percent increase in Spanish speakers. Ryan (2013) also reported from 2000 to 2010, there was a 111 percent increase in the number of speakers of African languages.

In the current study, high school ELL students spoke 73 different native languages. On an initial match of unique student identification numbers, 941/ 1878, or 50 percent, of students were missing primary language spoken in home. After an individual search, 685 primary

language spoken at home records were recovered by using the large, urban district's student database system, Infinite Campus. Of those 685 primary language spoken at home records recovered, the researcher was able to determine primary language spoken at home for 226 of them by cross-referencing a sibling in Infinite Campus. The result was that for 256 ELL students, the primary language spoken at home was unavailable for this study. Because 73 languages are represented in the high school sample in the study to conduct a survival analysis for each language was not feasible.

A decision was made to concentrate on the five largest native language groups, in addition to an "Other" category that includes 68 independent languages. The native language of Spanish, which is the most prevalent in the study, includes students from various Spanish speaking countries. In 1976, the U. S. Congress passed Public Law 94-311 that charged the federal governmental agencies to collect data on Hispanics (Taylor, Lopez, Martinez, & Velasco, 2012). The same authors stated, "Hispanics are categorized as an ethnic group – meaning they share a common language, culture and heritage, but not a common race" (p. 9). Although the Census Bureau has codes for 381 specific languages, the Census Bureau combines languages into language groups (Ryan, 2013). The four major language groups are Spanish, Other Indo-European languages, Asian and Pacific Island languages, and All Other languages (Ryan, 2013). In the study, Nepali falls into the Other Indo-European language group, while Arabic, Mai Mai, and Somali fall into the Other languages group. Native language is the independent variable in the study to examine how native language potentially affects English language proficiency (see Table 9).

Table 9: Native languages in the Analysis

Native language	Frequency	Percent
Spanish	562	29.9
Nepali	135	7.2
Somali	133	7.1
Arabic	116	6.2
Mai Mai	146	7.8
Other	530	28.2
Unknown	256	13.6
Total	1878	100.0

The second independent variable is time. Time is an independent variable because the length of time in the ESL program has the potential to influence probabilities to English language proficiency. Time, like school years, may be grouped into intervals (Lee & Wang, 2003). The data set has contributions from ELL students ranging from 1 year to 5 years. The independent variable of time is defined as an interval, one school year, at any point from 2009-2010, 2010-2011, 2011-2012, 2012-2013, or 2013-2014.

Dependent Variable.

The Overall Composite Score, which is 35% Reading, 35% Writing, 15% Speaking, and 15% Listening, on the ACCESS for ELLs® represents one of the two dependent variables. Overall Composite Scores are reported as a two-digit decimal number, with the first number revealing the ELL student's overall English language proficiency level. The range is 1.0 to 6.0. The exit criteria (dependent variable) to move from LEP to RFEP is the achievement of an Overall Composite Score of 5.0 or higher and an Overall Literacy Composite of 4.0 on Tier B or

Tier C ACCESS for ELLs® assessment (KDE, 2015). Once this benchmark is met, the ELL student transitioning into Re-designated Fully English Proficient and will be monitored for two years. The RFEP student will most likely not receive ESL support services, unless the high school offers a sheltered-content area course. The Overall Composite Score represents the culmination of the four language domains and is the major deciding factor in whether an ELL student stays in an ESL program or exits. Thus, the dependent variable is a dichotomous outcome of attainment of English language proficiency or not based on the Overall Composite Score. Attainment of English language proficiency is determined by a 5.0 or higher Overall Composite Score while an Overall Composite Score lower than 5.0 remains in the ESL program.

Statistical analysis.

This study concentrates on two analytic approaches to examine student English language proficiency on the ACCESS for ELLs® assessment in a large, urban district. The first analytic technique is to examine the data descriptively. The opportunity to describe a set of data allows the researcher to "provide estimations of central tendency in the population" (Tabachnick & Fidell, 2007, p. 7). This technique provides an opportunity to describe the trends in English language proficiency over a five school year period.

In a *Supplemental Report* to the *National Evaluation of Title III Implementation*, Cook and colleagues (2012) both identified and recommended descriptive analysis as a viable approach in determining time frames to specified English language proficiency. The authors stated the "goal of this approach is to get a sense of percentages attaining language proficiency, by time, initial English Language Proficiency level, and grade span" (p.30). ELLs who started their initial English language instruction at the newcomer program in State C in the school year

of 2011 - 2012 were followed over time. The authors used the total number of ELLs with complete data sets to calculate the cumulative percent of ELL students that reached English language proficiency. In grades three through five, the authors reported the lower the initial English proficiency level, the longer it took the students to become proficient, which mirrors prior research (Cook & Zhao, 2011; Conger, 2008). After one year of English language instruction, only eight percent (60/714) of third through fifth grade students at Level 1, attained English language proficiency. After four years of English language instruction, only fifty percent (359/714) of Level 1 ELLs reached English language proficiency. The outcomes of ELL students at the highest English language proficiency level differed. After one year of English language instruction, fifty seven percent (5271/9328) reached English language proficiency. After four years of English language instruction, eighty six percent (8021/9328) reached English language proficiency.

The second analytic approach is founded in the family of survival analysis, occasionally referred to in the literature as an event history analysis or a discrete-time survival analysis (Cook et al., 2012; Cook & Zhao, 2011; Conger, 2008; Klein & Moeschberger, 1997; Tabachnick & Fidell, 2007). Allison (2010) provided additional names for survival analysis as *failure time analysis*, *hazard analysis*, *transition analysis*, and *duration analysis* (p. 413). In general terms, a survival analysis approach estimates "the probability that a particular event of interest will occur in a given time frame" (Cook et al., 2012, p. 35). Allison (2010) describes survival analysis as "a collection of statistical methods that are used to describe, explain, or predict the occurrence and timing of events" (p. 413). More specifically for ELLs and this study, Cook and Zhao (2011) explain that "survival analysis explores the time it takes students at different proficiency

levels to reach a pre-specified proficiency criterion, identified in several WIDA states as English proficient" (p.2).

A 2008 study by Conger examined 8,976 ELL students who entered New York City public schools beginning in 1997. The study followed four cohorts of ELL students for a minimum of three years and a maximum of eight years, depending on the year of entry into New York City public schools and their age upon entry. Conger (2008) employed discrete time survival analysis techniques to separate the effect of age of entry in the English language acquisition process and timelines to reach English language proficiency. The English language proficiency assessment used in this study was the *Language Assessment Battery* (LAB). This English language proficiency test assesses ELL students in the domains of speaking, listening, reading, and writing. Students who score at or below the 40th percentile on the LAB are classified as ELL and qualify for English language support. The results suggest that an estimated range of twenty four percent to thirty percent of first year ELL student achieve proficiency after their first year of English language instruction. In addition, the results indicate that a range of thirty one percent to thirty nine percent of ELL student did not reach English language proficiency in their last year of observation. The same author describes that approximately half of the ELL students became English language proficient after three years. Conger (2008) described the other half of ELL students with the following statement.

> The half who take longer to become proficient tend to be students who enter at an older age. The negative effect of age of school entry on the rate at which English proficiency is acquired, and the likelihood that proficiency is acquired at all, is partially explained by the fact that older students tend to enter the school system with lower levels of proficiency (p. 25)

The use of discrete time survival analysis in this study allowed the researcher to estimate the likelihood of attaining English language proficiency prior to graduation.

Cook and others (2012) applied empirical methods, specifically using an event history analysis approach to examine growth on an English language proficiency assessment for ELL students in kindergarten through fifth grade, from the 2003-2004 school year to the 2007-2008 school year. For the 2003-2004 school year, the total number of students K-2, at an initial English language proficiency level of 1, was 7,728. At the end of the first year, 809 students became proficient. After the first year, the event history analysis technique yielded a probability that approximately ten percent of ELL students would become proficient. After five years of English language instruction and support, the output for the event history analysis technique yielded a thirty-nine percent probability of becoming English language proficient. Cook and colleagues (2012) argue that this approach can inform setting expected time frames "as students' initial ELP level influences the expected time frame for their attaining the English-proficient criterion, these data are used to illustrate the ways in which more refined time-to-English-proficiency criteria could be derived" (p. xiv). In addition, the same authors provided support for the event history analysis approach in that this statistical approach can "generate estimates that suggest a range of options and then illustrate how these can be applied by decision-makers" (Cook et al., 2012, p. 31).

In a 2011 paper presented at the American Educational Research Association National Conference, Cook and Zhao applied four analytic methods, including survival analysis, to explore the time it takes ELL students at different initial proficiency levels to reach English language proficiency according to the ACCESS for ELLs® assessment. The same authors describe three benefits of the survival analysis approach in the following quote.

> This type of analysis could be very helpful to states, districts, and schools in supporting ELs' acquisition of English. It could aid setting time expectations for accountability requirements in compliance with federal law. It could support educators in evaluating how language instructional programs are assisting in ELs' language acquisition. It could guide educators in identifying students who are or are not on tract to attaining proficiency (Cook & Zhao, 2011, p. 16-17).

Cook and Zhao (2011) indicated that "the benefit of conducting a survival analysis is that students who have not experienced the event can be included in estimating survival functions" (p. 11).

For the purpose of the study, survival analysis can be further defined by the following estimates: survival function, the pass rate / failure rate, and standard error. In their seminal work, Klein and Moeschberger (1997) asserted that "the basic quantity employed to describe time-to-event phenomena is the survival function, the probability of an individual surviving beyond time *x* (experiencing the event after time *x*)" (p. 22). In terms of this study, the survival function is the probability that an ELL student will not achieve English language proficiency at a specific time. Although survival function is useful, a more applicable method is to examine the pass rate. The "pass rate, which is 1 – the survival function and often termed the failure rate, is the likelihood that an EL will be proficient at a particular time" (Cook & Zhao, 2011, p. 17).

One of the primary strengths of a survival analysis technique is the ability to manage longitudinal data. In most longitudinal studies, a potential exists for missing data. Survival analysis has the ability to manage right censoring. Allison (2010) reported "right censoring occurs when some individuals do not experience any events, implying that an event time cannot

be measured" (p. 413). In their 2012 study, Cook and colleagues termed ELL students who did not reach English language proficiency in a given time frame as "censored" while ELL student who did reach English language proficiency in a given time frame as "noncensored" (p. 35). An additional strength of survival analysis is the ability to manage ELL students that either dropout of the data set due to attrition, or are a late addition to the data set (Allison, 2010; Cook et al., 2012). Allison (2010) explains that "censoring could be informative if it occurs at varying times because individuals drop out of the study, which could lead to biased estimates of the parameters" (p.415). Survival analysis is a robust analytic technique that complements the highly mobile tendencies of ELL students, the ever-expanding ELL population, and the varying English language proficiency timelines.

Data Collection Methods

The data for this study was gathered from 14 high schools from school years 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014. The Overall Composite Score, which is 35% Reading, 35% Writing, 15% Speaking, and 15% Listening, on the ACCESS for ELLs® was used. First, the data was combined by sorting the student data by the unique identifying feature of state identification number. Next, the researcher tallied the number of years that the ELL student was present in the database with an Overall Composite Score. The final step was to assign a code to each ELL student. Any ELL student who gained English language proficiency by receiving a 5.0 or high on the Overall Composite Score was coded with a 1. All other ELL students who scored 4.9 or less on the Overall Composite Score were coded with a 0. To use survival analysis, the data needs to be coded in this manner to determine who or what has survived the event, and who or what did not. Survive in this study refers to ELL students who did not gain English language proficiency. Those ELL students that gained English language

proficiency are referred to as “terminal event.” In addition, the primary language spoken in the home was recovered from the large, urban district’s database, Infinite Campus. After each of the top five language groups were sorted by language, a combined data analysis was performed. A second survival analysis was performed with language as an additional factor.

Chapter 4: Findings

Introduction

Research suggests that the English language proficiency growth rates for numerous ELL students are strongly correlated with their English language proficiency levels (Cook & Zhao, 2011; Conger, 2008). Conger (2008) examined how the age of entry into public schools affected the time to English language proficiency. The results of Conger's 2008 study suggested that just over fifty percent of students gained English language proficiency after three years. According to the same study, the students that did not typically gain English language proficiency were students who entered public schools older and with a lower English language proficiency level. If the federal accountability frameworks fail to carefully examine English language proficiency levels, both states and federal educational frameworks risk misjudging expected English language proficiency timelines.

The objective of this study was to evaluate the timelines to English language proficiency for high school students In English language instructional programs in a large urban school district. The research questions guiding the study are:

1. What is the likelihood that all high school ELL students in English language instructional programs will attain English proficiency on the ACCESS for ELLs® assessment prior to graduation?
2. Does success rate (attaining English language proficiency) on the ACCESS for ELLs® assessment vary by language or language group?

It is hypothesized that most high school ELL students will not exit LEP (Limited English Proficient) status in four years or less. In addition, it is hypothesized that not all language groups will demonstrate English language proficiency timelines at the same rate.

Data Analysis

The research questions guiding the study focused on the likelihood a high school ELL student would gain English language proficiency prior to graduation and the influence native language may have on English language proficiency growth rates. The descriptive statistics of mean, median, mode, and standard deviation were estimated to describe the trends in English language proficiency growth over a five school year period. A survival analysis was conducted with all ELL students in the dataset in addition to groups of Spanish, Nepali, Somali, Arabic, Mai Mai, Other, and Unknown speakers to determine the probability of timelines to English language proficiency.

Survival analysis was an appropriate choice since the study included longitudinal data and a highly mobile student group (Allison, 2010; Conger, 2008; Cook & Zhao, 2011). Survival analysis has the ability to manage right censoring. Allison (2010) reported "right censoring occurs when some individuals do not experience any events, implying that an event time cannot be measured" (p. 413). ELL students that enter the program after the start of data collection are considered left censored. Survival analysis life tables are appropriate because the time variable (Years) is categorical. ELL students that experience English language proficiency are referred to as "Attained", while those ELL students that did not are referred to as "Did not Attain."

Combined data analysis – all ELL students

The descriptive statistics for grouping for all ELL students (n = 1878) resulted in a mean of 1.71 for Years in the Program, a median of 1.00 Years in the Program, and a standard deviation of .921 for Years in the Program. The descriptive statistics for Most Recent Composite were a mean of 4.109, a median of 4.10, a mode of 6.0 (which is the highest Overall Composite Score), and a standard deviation of 1.382 (See Table 10).

Table 10: Descriptive Statistics for all ELL students

		Years in Program	Most Recent Composite
N	Valid	1878	1875
	Missing	0	3
Mean		1.71	4.109
Median		1.00	4.100
Mode		1	6.0
Std. Deviation		.921	1.1758
Variance		.848	1.382
95% Confidence Intervals for Means	Lower bound	1.67	4.056
	Upper bound	1.75	4.163

The descriptive statistics for Years of Program for all ELL students indicated that one Year had the highest frequency with 1031 occurrences, 478 for two Years, 263 for three Years, 99 for four Years, and 7 for five Years. Ninety-four percent of all occurrences reported in Years 1, 2, or 3 (See Table 11).

Table 11: Years in Program for all ELL students

		Frequency	Percent
Valid	1 year	1031	54.9
	2 year	478	25.5
	3 year	263	14.0
	4 year	99	5.3
	5 year	7	.4

Total	1878	100.0

The Attainment of English language proficiency for all ELL students was coded either a 1 for attainment of English language proficiency or a 0 for those students that did not attain English language proficiency. For all ELL students, ELL student that did not attain English language proficiency was n = 1293, or 69.8 percent, while n = 578, or 30.8 percent, did attain English language proficiency (See Table 12).

Table 12: Attainment of English language proficiency for all ELL students

	Frequency	Percent
Did not Attain	1308	69.6
Attained	570	30.4
Total	1878	100.0

The frequency table for Most Recent Composite for all ELL students is grouped by the English language proficiency levels from 1 – 1.9 (Entering), 2.0 – 2.9 (Emerging), 3.0 – 3.9 (Developing), 4.0 – 4.9 (Expanding), 5.0 – 5.9 (Bridging), and 6.0 (Reaching) (Yanosky et al., 2013). The Entering group had 74 students (3.95 percent), the Emerging group had 322 students (17.1 percent), the Developing group had 474 students (25.33 percent), the Expanding group had 431 students (22.98 percent), the Bridging group had 480 students (25.63 percent), while the Reaching group had 94 (5.01 percent) (see Appendix).

Survival Analysis for all ELL students

The actuarial life table method for survival analysis is an appropriate match for this data set (see Table 4). Lee and Wang (2003) stated that survival times may be grouped into intervals

and that "the life-table method incorporates all survival information accumulated up to the termination of the study" (p. 87). The data set has contributions from ELL students ranging from 1 year to 5 years.

In terms of the study, the survival function is the probability that an ELL student will not achieve English language proficiency at a specific time. Although survival function is useful, a more applicable method is to examine the pass rate. The "pass rate, which is 1 – the survival function and often termed the failure rate, is the likelihood that an EL will be proficient at a particular time" (Cook & Zhao, 2011, p. 17).

The actuarial life table produced in SPSS has thirteen columns and six rows, including the median survival time, which is the median time secondary ELL students remain in the ESL program. The Interval Start Time is defined as a unit of time, one school year, at any point from 2009-2010, 2010-2011, 2011-2012, 2012-2013, or 2013-2014. An additional benefit of the actuarial life table method is that it accommodate students that enter at any point during that one year interval. The second column is the Number Entering Interval. This column is best explained by the equation:

Number Entering Interval = Total – (withdrawn + attained proficiency)

The third column is the Number Withdrawn during Interval, which is Number Entering Interval minus the number of secondary ELL students who attained English language proficiency, minus the number of Number Entering Interval in the subsequent year. For example, 1878 - 361 = 1517 -847 = 670. The fourth column is the Number Exposed to Risk. This is a weighted coefficient for unknown cases. The weighted coefficient takes the number of secondary ELL students who did not attain proficiency, in addition to attrition, and then divided by two. Lee and

Wang (2003) stated, "it is assumed that the time to loss of withdrawal are approximately uniformly distributed in the interval" (p.89). Therefore, secondary ELL students who have moved, dropped-out, or no records found in the interval are exposed to the opportunity of English language proficiency or not for one-half the interval. The fifth column is Number of Terminal Events, which is the number the secondary ELL students that attained an Overall Composite Score of 5.0 or higher on the ACCESS for ELLs®. The sixth and seventh columns, Proportion Terminating and Proportion Surviving, represent inverse functions. The proportion terminating have attained English language proficiency, while the proportion surviving have not. The eight column is the Cumulative Proportion Surviving at End, which provides a cumulative rate for secondary ELL students who did reach English language proficiency (see Table 13).

For all ELL students ($N = 1878$), the median survival function, secondary ELL students who did not attain English language proficiency, was 3.91. The main analysis for the actuarial life-table indicated a decreasing pass rate for number of secondary ELLs students, ranging from 361 in Interval 1 to 1 student in Interval 5. The proportion of secondary ELLs students that attained English language proficiency remained mostly stable over the intervals, except for .19 in Interval 3. When language was not considered, approximately four out of five secondary English language learners, in any time interval, did not attain English language proficiency, but remain in the ESL program. In the large, urban district featured in this study, the ESL program has a success rate, in terms of attaining English language proficiency, of approximately 20 percent. The cumulative proportion for secondary ELL students who did not reach English language proficiency decreased over the intervals, which was expected (see Table 13).

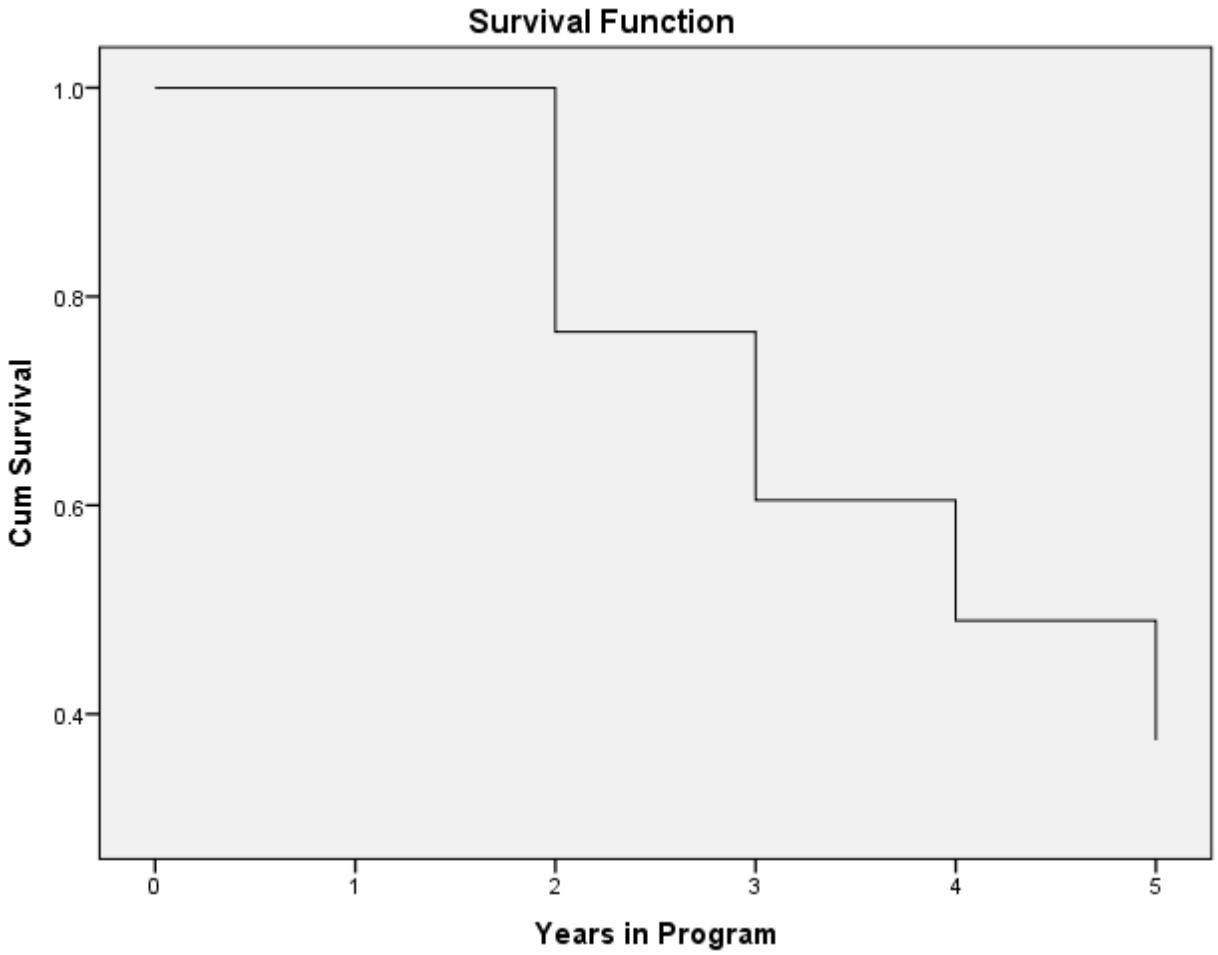
Table 13

Survival Analysis for all secondary ELL students Life Table[a]

Interval Start Time	Number Entering Interval	Number Withdrawing during Interval	Number Exposed to Risk	Number of Terminal Events	Proportion Terminating	Proportion Surviving	Cumulative Proportion Surviving at End of Interval	Std. Error of Cumulative Proportion Surviving at End of Interval	Probability Density	Std. Error of Probability Density	Hazard Rate	Std. Error of Hazard Rate
0	1878	0	1878.000	0	.00	1.00	1.00	.00	.000	.000	.00	.00
1	1878	670	1543.000	361	.23	.77	.77	.01	.234	.011	.26	.01
2	847	335	679.500	143	.21	.79	.60	.01	.161	.012	.24	.02
3	369	213	262.500	50	.19	.81	.49	.02	.115	.015	.21	.03
4	106	84	64.000	15	.23	.77	.37	.03	.115	.026	.27	.07
5	7	6	4.000	1	.25	.75	.28	.08	.000	.000	.00	.00

a. The median survival time is 3.91

Figure 3: Survival Function



Comparative Analysis for Native languages

To assess the effect of native language and timelines to English language proficiency, an actuarial life table and a Wilcoxon (Gehan) test for significance were conducted. The actuarial life table method was a more appropriate analysis than a Kaplan-Meier method because time is grouped into intervals to manage students entering and leaving the ESL program. The Kaplan-Meier method would be more appropriate if the data had continuous entry dates throughout the

year for ELL students (Lee & Wang, 2013). The Cox regression method would be more appropriate if the study included additional covariates. This study focused exclusively on the Overall Composite Score on the ACCESS for ELLs® assessment. The null hypothesis stated that no differences existed between native language groups. The Wilcoxon (Gehan) test was conducted to examine the pairwise comparisons between native language groupings. All data analyses were conducted using the Statistical Package for the Social Sciences (SPSS).

The main analysis for the actuarial life table method indicated that the proportion of native Spanish speaking ELL students attaining English language proficiency remained relatively stable across the time intervals, ranging from a low of .28 to a high of .40. The number of native Nepali speaking ELL students increased levels of attainment of English language proficiency with additional years in ESL instruction. The attainment increased from .10, to .12, to .25. This was a similar trend for native Arabic speaking ELL students. For both native language groups of Nepali and Arabic speaking students, three years of English language instruction produced a gain, from .12 to .25 for Nepali and .15 to .22 for Arabic. For native Somali speaking ELL students, there appears to be a critical point of English language support because the proportion of students in this group attaining English language proficiency declined sharply after the third interval of time. The number of native Mai Mai speaking ELL students attaining English language proficiency declined each interval. The Other language group represented a collection of 68 independent native languages. The proportion of ELL students attaining English language proficiency decreased with each subsequent interval, with the exception of the fourth year, in which .35 attained proficiency. This indicated that four years of English language instruction produced a higher proportion of students attaining English language proficiency. The Unknown language group represented ELL students whose data was not available in Infinite Campus. The

Unknown language group demonstrated a constant increase in the proportion of students attaining English language proficiency from .20, to .22, to .33 (see Table 14).

The data indicated that native Spanish speaking ELLs have the lowest median time to English language proficiency at 2.75 years, followed by Unknown at 3.60, while all other native language groups reported 4.0 years and above (see Table 14). The number of native Spanish speaking ELL students who remained in English language support classes was approximately 13 percent, or 1 in 10 students. The other native language groups had different results: Nepali 59 percent, Somali 73 percent, Arabic 61 percent, Mai Mai 57 percent, Other 35 percent, and Unknown 33 percent (see Table 14).

The results of the Wilcoxon (Gehan) test rejected the null hypothesis that no differences existed between native language groups and indicated a significant result ($F[6] = 83.10$, $p < .05$) (see Table 15). Pairwise comparisons between the language groupings of Spanish, Nepali, Somali, Arabic, Mai Mai, Other, and Unknown were conducted. Native Spanish speaking ELLs reported significant differences with all other language groups, $p < .05$. Native Nepali speaking ELLs reported significant differences with Spanish ($F[1] = 30.68$, $p < .05$), Mai Mai ($F[1] = 4.96$, $p < .05$), Other ($F[1] = 13.27$, $p < .05$), and Unknown ($F[1] = 4.87$, $p < .05$). Native Somali speaking ELL student reported significant differences with Spanish ($F[1] = 31.10$, $p < .05$), Mai Mai ($F[1] = 5.08$, $p < .05$), Other ($F[1] = 13.32$, $p < .05$), and Unknown ($F[1] = 4.61$, $p < .05$). Native Arabic speaking ELLs reported significant differences with Spanish ($F[1] = 31.10$, $p < .05$), Mai Mai ($F[1] = 5.73$, $p < .05$), Other ($F[1] = 14.11$, $p < .05$), and Unknown ($F[1] = 6.49$, $p < .05$). Native Mai Mai speaking ELL students reported significant differences with Spanish ($F[1] = 13.01$, $p < .05$, Nepali ($F[1] = 4.96$, $p < .05$), Somali ($F[1] = 5.08$, $p < .05$, and Arabic ($F[1] = 5.73$, $p < .05$). The combined language groups of Other reported significant differences

with Spanish ($F[1] = 11.94$, $p < .05$), Nepali ($F[1] = 13.27$, $p < .05$), Somali ($F[1] = 13.32$, $p < .05$), and Mai Mai ($F[1] = 14.11$, $p < .05$). The final language group of Unknown reported significant differences with Spanish ($F[1] = 19.59$, $p < .05$), Nepali ($F[1] = 4.87$, $p < .05$, Somali ($F[1] = 4.61$, $p < .05$, and Arabic ($F[1]= 6.49$, $p < .05$) (see Table 16).

Summary and Conclusion

The research study demonstrated that regardless of native language, nearly four out of five secondary English language learners did not attain English language proficiency according to the Kentucky Department of Education exit criteria on the ACCESS for ELLs® assessment. In addition, the research study demonstrated significant difference between native language groups, supporting the hypothesis that different language groups potentially attain English language proficiency with differing timelines, with native Spanish speaking ELL students progressing in the least amount of time. Native Spanish speaking ELL students represent approximately 28 percent of the data set, so the weighting of native Spanish speakers certainly influenced the combined languages timeline to English language proficiency. Therefore, the null hypothesis was rejected as the Wilcoxon (Gehan) statistical analysis indicated a significant difference between native language groupings.

Table 14

Life Table for Native languages

First-order Controls	Interval Start Time	Number Entering Interval	Number Withdrawing during Interval	Number Exposed to Risk	Number of Terminal Events	Proportion Terminating	Proportion Surviving	Cumulative Proportion Surviving at End of Interval	Std. Error of Cumulative Proportion Surviving at End of Interval	Probability Density	Std. Error of Probability Density	Hazard Rate	Std. Error of Hazard Rate
Spanish	0	562	0	562.000	0	.00	1.00	1.00	.00	.000	.000	.00	.00
	1	562	194	465.000	156	.34	.66	.66	.02	.335	.022	.40	.03
	2	212	71	176.500	58	.33	.67	.45	.03	.218	.025	.39	.05
	3	83	34	66.000	22	.33	.67	.30	.03	.149	.027	.40	.08
	4	27	18	18.000	5	.28	.72	.21	.04	.083	.033	.32	.14
	5	4	3	2.500	1	.40	.60	.13	.07	.000	.000	.00	.00
Nepali	0	135	0	135.000	0	.00	1.00	1.00	.00	.000	.000	.00	.00
	1	135	56	107.000	11	.10	.90	.90	.03	.103	.029	.11	.03
	2	68	38	49.000	6	.12	.88	.79	.05	.110	.042	.13	.05
	3	24	16	16.000	4	.25	.75	.59	.09	.197	.086	.29	.14
	4	4	4	2.000	0	.00	1.00	.59	.09	.000	.000	.00	.00
Somali	0	133	0	133.000	0	.00	1.00	1.00	.00	.000	.000	.00	.00
	1	133	56	105.000	11	.10	.90	.90	.03	.105	.030	.11	.03
	2	66	29	51.500	7	.14	.86	.77	.05	.122	.043	.15	.05
	3	30	20	20.000	1	.05	.95	.73	.06	.039	.038	.05	.05
	4	9	9	4.500	0	.00	1.00	.73	.06	.000	.000	.00	.00
Arabic	0	116	0	116.000	0	.00	1.00	1.00	.00	.000	.000	.00	.00
	1	116	50	91.000	7	.08	.92	.92	.03	.077	.028	.08	.03
	2	59	25	46.500	7	.15	.85	.78	.05	.139	.049	.16	.06
	3	27	18	18.000	4	.22	.78	.61	.09	.174	.078	.25	.12

	4	5	5	2.500	0	.00	1.00	.61	.09	.000	.000	.00	.00
Mai Mai	0	146	0	146.000	0	.00	1.00	1.00	.00	.000	.000	.00	.00
	1	146	29	131.500	25	.19	.81	.81	.03	.190	.034	.21	.04
	2	92	29	77.500	12	.15	.85	.68	.04	.125	.034	.17	.05
	3	51	27	37.500	3	.08	.92	.63	.05	.055	.031	.08	.05
	4	21	20	11.000	1	.09	.91	.57	.07	.057	.055	.10	.10
Other	0	530	0	530.000	0	.00	1.00	1.00	.00	.000	.000	.00	.00
	1	530	161	449.500	113	.25	.75	.75	.02	.251	.020	.29	.03
	2	256	89	211.500	38	.18	.82	.61	.03	.135	.020	.20	.03
	3	129	78	90.000	11	.12	.88	.54	.03	.075	.021	.13	.04
	4	40	28	26.000	9	.35	.65	.35	.05	.187	.051	.42	.14
	5	3	3	1.500	0	.00	1.00	.35	.05	.000	.000	.00	.00
Unknown	0	256	0	256.000	0	.00	1.00	1.00	.00	.000	.000	.00	.00
	1	256	124	194.000	38	.20	.80	.80	.03	.196	.028	.22	.04
	2	94	54	67.000	15	.22	.78	.62	.05	.180	.041	.25	.06
	3	25	20	15.000	5	.33	.67	.42	.08	.208	.078	.40	.18

Table 15: Overall Comparisons[a]

Wilcoxon (Gehan) Statistic	Df	Sig.
83.104	6	.000

a. Comparisons are exact.

Table 16: Pairwise Comparisons[a]

(I) Lang_code_all	(J) Lang_code_all	Wilcoxon (Gehan) Statistic	Df	Sig.
Spanish	Nepali	30.675	1	.000
	Somali	30.341	1	.000
	Arabic	31.103	1	.000
	Mai Mai	13.012	1	.000
	Other	11.943	1	.001
	Uknown	19.585	1	.000
Nepali	Spanish	30.675	1	.000
	Somali	.000	1	.993
	Arabic	.156	1	.693
	Mai Mai	4.955	1	.026
	Other	13.268	1	.000
	Unknown	4.872	1	.027
Somali	Spanish	30.341	1	.000
	Nepali	.000	1	.993
	Arabic	.133	1	.716
	Mai Mai	5.079	1	.024
	Other	13.315	1	.000
	Uknown	4.611	1	.032
Arabic	Spanish	31.103	1	.000
	Nepali	.156	1	.693
	Somali	.133	1	.716
	Mai Mai	5.725	1	.017
	Other	14.111	1	.000
	Unknown	6.486	1	.011
Mai Mai	Spanish	13.012	1	.000

	Nepali	4.955	1	.026
	Somali	5.079	1	.024
	Arabic	5.725	1	.017
	Other	1.686	1	.194
	Unknown	.081	1	.776
Other	Spanish	11.943	1	.001
	Nepali	13.268	1	.000
	Somali	13.315	1	.000
	Arabic	14.111	1	.000
	Mai Mai	1.686	1	.194
	Unknown	3.719	1	.054
Unknown	Spanish	19.585	1	.000
	Nepali	4.872	1	.027
	Somali	4.611	1	.032
	Arabic	6.486	1	.011
	Mai Mai	.081	1	.776
	Other	3.719	1	.054

a. Comparisons are exact.

Chapter 5: Discussion, Interpretations, and Recommendations

Summary

The purpose of this study was to examine timelines to English language proficiency for high school ELL students, and determine if Native language had an influence on timelines to the acquisition of English language proficiency. Under current federal policy, the No Child Left Behind Act of 2001 (NCLB, 2001) considers ELLs as a unified, homogenous group in assessment reporting, despite the actuality ELL students represent a wide variation in educational backgrounds and academic preparedness (Robinson, 2008; Abedi, 2004; DeCapua & Marshall, 2010; Short, 2002; Freeman & Freeman, 2002; Cook & Zhao, 2011; Peregroy & Boyle, 2000; Rong & Preissle, 2009; Abedi & Dietel, 2004; Conger, 2008). Researchers have suggested that the federal policy definition of the ELL population should be expanded to reflect different language proficiency timelines, with critical attention placed on language proficiency levels (Cook & Zhao, 2011; Conger, 2008; Abedi & Dietel, 2004; Abedi, 2004; Menken, 2010; Crawford, 2004; Cook, Boals, & Lundberg, 2011). Two research questions guided this study:

1. What is the likelihood that all high school ELL students in English language instructional programs will attain English proficiency on the ACCESS for ELLs® assessment prior to graduation?
2. Does success rate (attaining English language proficiency) on the ACCESS for ELLs® assessment vary by language or language group?

The most recent, Overall Composite Scores on the ACCESS for ELLs® for high school ELL students (n = 1878) and time in the ESL program provided the variables for survival analysis. This same group represented 73 languages, and five consecutive school years of data.

The data analysis consisted of two survival analyses. The first survival analysis involved the combined data set, while the second survival analysis involved groupings of languages (Spanish, Nepali, Mai Mai, Arabic, Somali, Other, and Unknown) as additional factors. In the first survival analysis, for all ELL students in the combined data set, the median time for the attainment of English language proficiency was 3.91with the cumulative proportion of ELL students staying in ESL instructional programs after 5 years was .28. After language groupings were added as additional factors, the median time for the attainment of English language proficiency was 2.75 for Spanish, 4.0 for Nepali, 4.0 for Somali, 4.0 for Arabic, 4.0 for Mai Mai, 4.21 for Other, and 3.6 for Unknown. The analysis demonstrated a significant different between language groupings and thus support the decision to reject the null hypothesis. The data also strongly suggest that due to the cumulative proportion of students remaining in the ESL instructional program declining in an approximate linear fashion, the success rate of the ESL program remained constant year to year.

Discussion

The results from this study strongly suggest that ELLs have varying timelines to English language proficiency. While some ELLs move quickly to English language proficiency, some may never reach the established Kentucky Department of Education LEP exit criteria on the ACCESS for ELLs® assessment. Although the ELL student sample was K-5, Cook and others (2012) reported that after the first year, the event history analysis yielded a probability that approximately ten percent of ELL students would become proficient. In this high school study, approximately twenty-three percent of ELL students became proficient. After five years of English language instruction and support, the event history analysis yielded a thirty-nine percent probability of becoming English language proficient. In the current high school study,

approximately twenty-five percent of ELL students became proficient. Conger (2008) reported that after three years, approximately half of the high school ELL students in the study became proficient.

The results in the study signify a relatively stable success rate for ELLs in the high school program, an estimated twenty-three percent success rate. While this is positive, the contrary might suggest that an estimated seventy-seven percent of ELLs are not realizing this level of English language proficiency. As Cook and others stated that survival analysis has the potential to "suggest a range of options and then illustrate how these can be applied by decision-makers" (Cook et al., 2012, p. 31). The "decision-makers" include ESL teachers, ESL Coordinators, high school guidance counselors, Kentucky Department of Education officials, and state legislators.

Timelines to English language proficiency must first differentiate levels of English language proficiency, acknowledge the effects of native language literacy levels, and the impact of prior educational experiences or lack thereof. Cummins (1979) provided a framework that included Basic Interpersonal Communication Skills (BICS) and CALPS, considered social language that usually takes approximately 2 years. Communicative Academic Language Proficiency (CALPS) is the language of academic and content areas which can take up to 7 years to master. A study by Hakuta, Butler and Witt (2000) supports Cummins (1979) framework, but also illustrated that SLIFE students take even longer to attain this academic language.

The interaction of factors like SLIFE status, the refugee experience, and mental health concerns like PTSD has the potential to seriously affect timelines to English language proficiency. Many SLIFE students enter American schools with a myriad of socio-emotional needs that combine with academic challenges to form a truly complex situation. With limited

mental health programs available through school districts, possible cultural stigma associated with receiving mental health assistance, and the limited number of native language mental health specialists, services may not be reaching the young adolescents that genuinely need support (Westermeyer and Williams, 1986).

Currently, the large, urban district has a system to code an ELL student as either refugee or SLIFE during the enrollment process, but Infinite Campus does not have the capacity for data entry. The self-reporting of parents lacks accuracy. In reality, numerous students in this study would fit this status. Although the precise number is not available, most of the Nepali, Mai Mai, and Somali ELL students grew up in refugee camps. According the principal at Newcomer Academy, approximately seventy five percent of the ELL students are refugees, while an estimated twenty five percent have limited or interrupted formal education (G. Snow, personal communication, September 7, 2014). Collier (1989) offered generalizations informed by research about the relationship between native language (L1), the second language (L2) and previous educational experience.

- Immigrants arriving at ages 8 to 12, with at least 2 years of L1 schooling in their home country, take 5 to 7 years to reach the level of average performance by native speakers on L2 standardized tests in reading, social studies, and science when they are schooled exclusively in the second language after arrival in the host country. Their performance may reach national norms in as little as 2 years in mathematics and language arts.
- Young arrivals with no schooling in their first language in either their home country or the host country may take even longer to reach the level of average performance by native speakers on L2 standardized tests: possibly as long as 7 to

10 years in reading, social studies, and science, or indeed, never. Very little longitudinal research has been conducted in this area, however.

- Adolescent arrivals who have had no L2 exposure and who are not able to continue academic work in their first language while they are acquiring their second language do not have enough time left in high school to make up the lost years of academic instruction.
- Without special assistance, these students may never reach the 50th NCE or may drop out before completing high school. This is true both for adolescents with a good academic background and for those whose schooling has been limited or interrupted (Collier, 1989, p. 527).

The intentional grouping of ELL students based on individualized needs is a reasonable recommendation to consider. If districts, state departments of education, and federal policies created categories like ECE (Exceptional Child Education), ELL students would receive more informed, individualized pathways. In the large, urban district, ECE services are provided for the following categories (School system data source 2, 2015):

- Autism (U)
- Deaf and Hard of Hearing (HI)
- Deaf/Blind (V)
- Developmental Delay (DD)
- Emotional Behavioral Disability (EBD)
- Functional Mental Disability (FMD)
- Mild Mental Disability (MMD)

- Multiple Disability (MD)
- Physical Disability and Other Health Impairment (PDOHI)
- Specific Learning Disability (SLD)
- Speech or Language Impairment (S/L)
- Traumatic Brain Injury(TBI)
- Visual Impairment (VI)

In addition to further defining ELL categories, each ELL student would potentially benefit from an Individualized Educational Plan (IEP), like ECE students. Both academic and social and emotional needs are addressed to support the student. The following description is from the large, urban district's website on IEP development (2015):

> An Individual Education Program (IEP) is a written document that is developed within an Admissions and Release Committee (ARC) meeting. The IEP document targets goals and objectives/benchmarks and provides information regarding specially designed instructional techniques that may be appropriate to assist the student in achieving the outlined goals and objectives/benchmarks. After determining targeted goals and objectives/benchmarks, the ARC will determine what types of specially designed instruction and related services may be needed for IEP implementation.

Currently, a Program Services Plan (PSP) is completed for each LEP student (see Appendix), but the IEP is more robust, in terms of specifically designed instruction, in addition to the regular

conferencing of content teachers, parents / guardians, and the student. Below is the PSP description from Kentucky Department of Education (2012).

> Program Services Plan (PSP) – A district or school PSP committee (e.g., English Language Learner (ELL) and mainstream teachers/ specialists, an instructional leader, counselor, parent, student) will design a PSP for each student identified as having limited English proficiency. The PSP should include the following: the reasons for identification (results of the W-APT screener, and when available, the ACCESS for ELLs® annual language assessment), level of English proficiency, previous academic background and experience, cultural and language history, service delivery model/s for English language instruction, and all appropriate instructional and assessment accommodations and/or modifications. The PSP will be shared with all stakeholders involved in the EL's academic and language education. The PSP is consistently and regularly monitored for relevance and effectiveness throughout the year, and individualized accommodations should be evaluated for appropriateness and revised at least once a year based on the annual ACCESS for ELLs® assessment results. If a school does not have the accommodations documented in the PSP then there could be a test code violation if the accommodations are allowed on the state assessment (p.33).

As ELL students move into the country, they may be age appropriate for junior or senior year, but have experienced interrupted formal education or have no formal educational background at all. These students have an extremely low probability of graduating in one or two years. The school will be penalized for not graduating the student in four years. Currently, there are no exceptions in these situations.

The Kentucky Department of Education (2013) has guidelines to establish graduation cohorts. The cohort determination was based on the student's first year in grade 9 (Kentucky Department of Education, 2013). Kentucky Department of Education stated that a student "must graduate with a regular high school diploma to be an on-time graduate for that cohort" (p. 3). The Graduation Rate is twenty percent of a school's overall accountability score, along with twenty percent for Achievement, twenty percent for Gap, twenty percent for Growth, and twenty percent for College/Career Readiness. According to Kentucky State Statute KRS 160.346 (2012), a high school whose graduation rate has been 60 percent for three or more years would be labeled a Persistently Low-Achieving (PLA) school. In addition, a school that enters the lowest 5 percent of all schools that fail to meet achievement targets would also be labeled as PLA. From KRS 160.346, the potential consequences of this status include the following: "external management option"; "restaffing option"; "school closure"; and "transformation option" (p. 3-4). These consequences range from closing the school to removing the principal to teachers having to reapply for their jobs.

This cohort model graduation rate accountability system is problematic for secondary ELL students for a number of reasons. First, refugee, SLIFE and other ELL students may need to extended timelines to reach English language proficiency. These students may not have developed the academic English and literacy skills to be successful in high-stakes tested content areas such as Algebra II and Biology. If they do not earn credits for this coursework, they will have to retake the courses in order to graduate, thus delaying their anticipated four year graduation cohort. In the end, the school will be penalized in the accountability score.

The analysis from the study demonstrated that timelines to English language proficiency were different for different language groups, with attainment for native Spanish speakers moving

the fastest, while the other top four were relatively the same. If the assumption is made that numerous adolescent ELL students entering the high school level have experienced refugee circumstances or have limited, interrupted, or no formal education, the timelines to English language proficiency more closer match the work of Collier (1989). The school district, state department of education, and federal policy level should more closely examine the broad category of ELL student to consider alternative pathways for refugee and SLIFE students. The addition of an ESL-based GED program would provide a possible alternative pathway.

One potential explanation for the difference in English language proficiency timelines between native Spanish speaking ELLs and the other language groups is possible cognate advantage amongst English and Spanish. Kelley and Kohnert (2012) reported that "when cognates are present, proficiency in one language can assist with 'meaning making' in an unfamiliar language" (p. 191). August, Carlo, Dressler, and Snow (2005) stated that English and Spanish share numerous cognate pairs. Holmes and Guerra Ramos (1993) purported that the range of cognates could potentially range from a third to half the active vocabulary of an average educated person. The cognate advantage for native Spanish speaking ELLs allows these ELLs students to independently create and transfer meaning from Spanish to English (Kelley & Kohnert, 2012).

Recommendations for Practice

In an effort to differentiate for the secondary ELL students, this compilation of recommendations for practice has the potential to influence English language proficiency growth and build teacher capacity. This compilation ranges from instructional framework and cultural

responsiveness to the creation of information gathering documents. First, an overview of a culturally responsive instructional framework to better to connect to refugee and SLIFE students.

High-Context (HC) and Low-Context (LC) cultures.

Teachers, administrators, and all stakeholders working with ELL students, especially secondary newcomers, could potentially benefit from a culturally-based framework for examining the relationship between culture and education. Hall (1976) provides a culturally-based structure for how SLIFE students might perceive the educational process and literacy. Hall's (1976) criteria are based on cultural interpretations of time and space, verbal and nonverbal messages, social and gender roles, interpersonal relationships, and education. According to Hall (1976), cultures are arranged along a continuum from low-context (LC) to high-context (HC). LC cultures tend to value concepts such as the importance of time, planning, schedules, and are more focused on varying aspects of the individual like individual achievement and individual success. In contrast, HC cultures tend to honor social relationships and view themselves as mutually dependent members of a group with duties to an in-group. The United States would likely subscribe to the LC end of the continuum, while many Asian and African cultures would likely be categorized on the HC end.

Ibarra (2001) extends Hall's structure to link the potential mismatch of culture and expectations in United States educational system and the educational systems of ELLs. He refers to this discrepancy in HC versus LC as cultural dissonance. One of the intersections of dissonance is on academic foundations. HC cultures tend to not have a strong academic foundation and a propensity to learn information in context that is not always based on scientific analysis. LC cultures are likely to learn information in isolation and acquire knowledge for

knowledge's sake. SLIFE students are especially susceptible to this cultural dissonance because of limited exposure to literacy skills, classroom routines, classroom expectations, and proficiency in English (DeCapua & Marshall, 2010). DeCapua and Marshall (2010) defend the notion that for ELLs and SLIFE students, it is not an intelligence issue or one culture is better than another, but simply, "this is a mismatch and not a deficit" (p. 163).

An additional area that "cultural dissonance" (Ibarra, 2001) interrupts perspectives on education is the student-teacher relationship. In many LC cultures, there is a gradual release and separation from teacher to student in seeking information, continually moving towards independency in the pursuit of knowledge (DeCapua and Marshall, 2010). Although scaffolding exists, the primary goal is to move the student to learn on his or her own. Thus, learning becomes a further isolated event, shifting away from a cooperative one. HC cultures, especially with SLIFE students, tend to value personal relationships and collectivism. This adjustment in learner accountability is often a challenging transition for many SLIFE and HC students.

Academic versus pragmatic.

Early on, in LC cultures, like the United States, formal education concentrates on developing skills in categorization, classification, and forms of abstract thinking (Hall, 1976). The acquisition of knowledge for knowledge's sake is a characteristic that is both respected and esteemed (DeCapua & Marshall, 2011). Students learn about a topic by studying it, often in isolation, with an end goal of becoming independent. In the academic context, one of the critical vehicles for learning is reading and comprehending text. This emphasis is taught and developed from the earliest grades. According to DeCapua and Marshall (2010), the "key elements of the

US classroom are future relevance, independence, individual achievement and accountability, the written word, and academic orientation" (p. 167).

On the other hand, HC cultures are more closely aligned with a pragmatic approach. Knowledge is immediate, relevant, and applicable. HC cultures typically derive meaning via context, not through categorization. ELLs and SLIFE students bring with them rich, diverse life experiences and real-world knowledge that teachers should attempt to harness (DeCapua & Marshall, 2010). The U. S. educational system accentuates the concept of delayed gratification and "the next grade." For many ELLs and especially SLIFE students, they need to see the immediate relevance of a concept or skill. A final feature of the pragmatic orientation is that for most SLIFE students, learning is an oral process. Oral language is the primary vehicle of knowledge and is considered to be the gold standard. Many SLIFE students value the oral language skills of memorization and repetition. Typically SLIFE students from an oral language background encounter difficulties making the transition to using a text to learn (DeCapua & Marshall, 2010).

Mutually adaptive learning paradigm (MALP).

A need exists to blend the two worlds of SLIFE student high context culture (pragmatic) with recognized foundational skills in reading and literacy (academic). For SLIFE students what is needed and what is demanded are frequently at odds. The Mutually Adaptive Learning Paradigm (MALP) may offer some insight into how to bridge and marry these often mismatching structures (DeCapua & Marshall, 2009; Marshall, 1998). MALP is an instructional model that combines the cultural dissonance (Ibarra, 2001) that many SLIFE experience as it adapts

elements of the U. S. formal educational system. MALP delicately balances features of both LC and HC cultures to support the SLIFE student as he or she transitions the process of education.

DeCapua and Marshall (2009) identify three key components of MALP. The first component is accepting conditions that SLIFE students need. Students from HC cultures are constantly looking for immediate relevance. The classroom teacher needs to instruct the key components of a balanced literacy approach with pragmatic and age appropriate activities in mind. An additional feature of SLIFE conditions is to link learning targets closely to the learner's world. Instruction should be created that fosters a strong interpersonal relationship. The second component of MALP is the blending of HC learning experiences with the new LC learning experiences. For the student, this next step includes both individual and shared responsibility. The focus of instruction is on both oral and written production. The classroom teacher also takes steps forward to prepare the SLIFE student for individual accountability on standardized testing. The third component of MALP is to focus on LC learning activities with known language and content. The final component emphasizes the bridge to academic ways of thinking. The recommendation is to develop analysis activities that teach decontextualization skills. These activities will help the SLIFE students extend their critical thinking skills. This third component unifies the academic and pragmatic through carefully designed learning activities.

Although the research base for MALP is developing, there exists one 5-month qualitative study by DeCapua and Marshall (2010). The researchers started with 16 SLIFE students, ages ranging from 15 to 20, but after 83 days of intervention, three students had dropped out of school, while one student was expelled. The teacher had a Master's degree in TESOL (Teaching of English to Speakers of Other Languages), state certification, and five years of teaching

experience. The researchers collected qualitative data from three sources: classroom observations, interviews, and student work. The overarching goal of the study was to investigate classroom engagement and classroom interactions. After a two day professional development on the theoretical framework for MALP, the team observed the teacher every two weeks for a total of 10 sessions. The team focused on teacher-student and student-student interactions.

The study provided qualitative data on a history lesson on American symbols before the MALP framework and professional development had been implemented. As the research team decoded the data, a few highlights emerged. The teacher's lesson did not follow the three main components of the MALP framework. The conditions for SLIFE students were not met. The teacher was presenting facts that had no immediate relevance to her students. The students tended to only interact with the teacher and not each other. In this lesson, there were no collaborative tasks. In addition the teacher focused on oral delivery of content with no literacy task. Finally, the teacher did not bring in any academic tasks. Although the teacher was energetic and caring, the students were indifferent and not engaged. In an interview the teacher responded with the following statement: "It's like pulling teeth to get them to say or write anything" (DeCapua & Marshall, 2010, p. 60).

Over the five month intervention, the teacher began to incorporate elements of the MALP framework. She intentionally provided activities that were immediately relevant to the students. The authors described a history unit on the Civil War in which the students explored what they had in common with the Civil War soldiers. The students used the academic task of Venn diagrams to compare and contrast. The students worked collaboratively in small groups and worked together to complete a whole class Venn diagram. The authors shared numerous examples of academic tasks like producing a variety of graphic organizers and both increased

and improved writing. The students were developing critical thinking skills by use of Venn diagrams and T-charts. Through various teacher and student interviews, the data demonstrated a higher level of student engagement (DeCapua & Marshall, 2010). DeCapua and Marshall (2010) suggest that:

> MALP is a potentially powerful new instructional model that can reach those ELLs most at risk. The three components of MALP – accept conditions for learning, combine processes for learning, and focus on academic tasks with familiar language and content – provide a framework for educators. In this way, teachers of SLIFE can systemically address differences in learning paradigms (pg. 65).

Build teacher capacity through professional development.

As teachers begin to understand the process of language acquisition, the role culture plays in education, and the connection between first language literacy and second language development, effective instruction for ELLs has the potential to increase. The following list comes from the research base on effective instruction for ELLs (August & Shanahan, 2006; Gerstern et al., 2007).

1. An understanding of second-language acquisition and the role that students' first language plays in learning a second language.
2. An ability to differentiate instruction for ELLs based on first and second language proficiency and content knowledge. Teachers can use WIDA's Can Do Descriptors to assist with this process (WIDA, 2015). Following is a list of how teachers might use the Can Do Descriptors from WIDA's website.

a. Share with classroom teachers as a way to describe or explain the stages of English language development using concrete examples;
b. Work with content teachers to show language may be integrated within a given discipline or content area;
c. Use to plan with tutors or mentors who work with English language learners;
d. Develop or co-develop lessons with differentiated language objectives;
e. Set language goals with their English language learners;
f. Explain students' progress in listening, speaking, reading and writing to parents/ family members;
g. Suggest language goals to be incorporated into Individual Education Programs (IEPs) for English language learners with diagnosed disabilities;
h. Translate English language proficiency test scores (i.e., ACCESS for ELLs®, the W-APT™, WIDA MODEL™) into instructional practice;
i. Observe and note levels of student performance as a precursor to using WIDA Speaking and Writing rubrics for formative assessment;
j. Advocate on behalf of English language learners to show what they CAN DO.

3. An ability to create environments that foster second language acquisition.
4. An ability to use a full range of instructional strategies to help ELLs access the content delivered in English.
5. An ability to understand the cultural backgrounds of their students.
6. An ability to teach emergent and beginning literacy strategies at the secondary level. Many high school content area teachers are trained in reading comprehension and close-reading strategies, but not in emergent and beginning literacy strategies.

Additional Recommendations.

The following programmatic recommendations have the potential to affect change in the ESL Department in the large, urban district and the Kentucky Department of Education. First, the ESL Department should work in collaboration with Infinite Campus to create and monitor an instrument to not improve the identification process of refugee and SLIFE students, but also provide supplemental information, like previous educational experience, to better inform teachers and central office staff. Second, the large, urban district in the current study should offer a multitude of summer programs for ELL students at all levels. Extended English and content area learning opportunities have the potential to offset the loss of achievement in the summer (Alexander, Entwisle, & Olson, 2007).

Limitations of Study

The results of the current study suggest that the effectiveness of the ESL program is generally consistent, but the likelihood of a high school ELL student achieving English language proficiency according to the Kentucky Department of Education exit criteria is only 23 percent. One limitation of the current study is that the survival analysis was conducted on the high school experience of the ELL students, with time intervals ranging from 1 school year to 5 school years of data. The influence of total time in the ESL program was not accounted for. It is possible that some of the ELL students in the data set entered the ESL program in 1st grade, while others entered as true newcomers, first entry to U. S. public schools. The only verifiable newcomers in current data set would be ELL students from ESL Newcomer Academy, which was one of the 14 high schools in the study. The main obstacle is that ESL Newcomer Academy is a transitional high school, in that ELL students typically stay for 1 to 2 years and then transition out to one of

the other 13 high schools in the study. The study would be strengthened if the data was available to determine how length in an ESL program, elementary, middle, and into high school influences timelines to English language proficiency.

A second limitation is the grouping of the other 68 independent languages into one group, Other. These independent languages could potentially have very different probabilities to English language proficiency. The next six highest languages represented a sample size ranging from 88 to 30. Sixty-two independent languages had samples sizes of 15 or less. The study would be strengthened if the survival analysis was performed and compared against each independent language, but that was beyond the scope of this dissertation.

A third limitation is that lack of an accurate SLIFE screener to determine the impact of interrupted or limited formal education. The current methods for acquiring this valuable data are personal interviews with families and a completed section of the background information packet. The principal data information system for the large, urban district and the State of Kentucky is Infinite Campus. Currently, Infinite Campus does not have a tab to mark for SLIFE status, so there is no tracking system readily available to share with all stakeholders.

Topics for Further Research

Additional research is needed to investigate how age of entry affects English language proficiency (Conger, 2008). As the number of ELL continues to rise, so does the need for specialized programs for secondary ELLs. In a short amount of time, secondary ELL must navigate English language acquisition and academic language in content area classes. If our ultimate goal is to facilitate and improve English language proficiency while building a solid

educational foundation to mold productive citizens in our country, we need to better understand the interplay between age, prior educational experience, and native language literacy.

"Long-term English language learners" (LTELL) are another group of ELLs that are under-represented in the body of secondary research (Menken, Kleyn, & Chae, 2012, p. 122). Menken and others (2012) stated, "Despite the reality that large numbers of such students currently attend U. S. schools, there has been practically no research conducted about them to date, nor do specialized educational programs exist to meet their needs" (p. 122). The same authors define this group of ELLs as "students who have attended school in the United States for 7 years or more, and continue to require language support services in school" (p. 122). Common characteristics of LTELLs are the following (Menken et al., 2012):

- Typically students in grades 6-12.
- Often orally bilingual and sound like they have native English language proficiency, but have limited native language literacy and generally perform below grade level in reading and writing and other content areas that require literacy.
- Have experienced inconsistent schooling because of frequent moves, both in the United States and back to family's country of origin.

Numerous high school ESL or bilingual programs are not designed to appropriately meet the needs of ELLs with limited native language literacy or underdeveloped academic literacy in English (Menken et al., 2012; Menken & Kleyn, 2009; Ruiz de Velasco & Fix, 2000). A significant benefit would be realized if the large, urban district would commit to developing

professional development series on explicitly teaching literacy across the content areas and train all teachers to become literacy teachers.

Another tenet to research is effective instructional practices at the secondary level. The New York State Department of Education recommended that doctoral programs at the college level should encourage dissertations in the area of secondary ELLs with a concentration on effective instructional practices (New York State Department of Education, 2015).

The current study focused on actuarial table method to examine probabilities to English language proficiency. Another avenue to explore would be to use a Cox Regression to see if specific indicators are critical in the English language proficiency timeline. The ACCESS for ELLs® assessment provides numerous scores and subsets of scores from each of the four domains of speaking, listening, writing, and reading. The use of a Cox Regression method has the potential to uncover a specific indicator that produces more effective results on the path to English language proficiency.

The federal policy perspective of ELLs states that ELLs are a uniform group of students. The current study demonstrates that at the high school level only an estimated twenty-three percent of all ESL student attain proficiency prior to graduation. In addition, native languages seem to respond differently to the timelines to English language proficiency. Section 9101 of the NCLB (2001) states that an LEP student, "whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual the opportunity to fully participate in society." If ELL students could be categorized more appropriately in terms of English language proficiency, prior educational experience, and native literacy levels, in addition to creating individualized pathways to acquire knowledge, especially at the secondary, level, the

potential for this group to participate fully in society might be achieved. In closing, Pappamihiel and Walser (2009) stated that "We use language as a tool of expression; simply put, language is the most complex tool in our repertoire of communication tools. It cannot be mastered in a year" (p. 135). Language takes time and no other group is more at risk than secondary, newcomer ELL students.

References

Abedi, J. (2004). The no child left behind act and English language learners: Assessment and accountability issues. *Educational Researcher*, *33*(1), 4-14.

Abedi, J. (Ed.). (2007). *English language proficiency assessment in the nation: Current status and future practice*. University of California, Davis, School of Education.

Abedi, J., & Dietel, R. (2004). Challenges in the no child left behind act for English language learners. *CRESST Policy Brief*, *7*.

Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2007). Lasting consequences of the summer learning gap. American Sociological Review, 72(2), 167-180.

Allison, Paul D. (2010) "Survival analysis." pg. 413-425 in The Reviewer's Guide to Quantitative Methods in the Social Sciences, edited by Gregory R. Hancock and Ralph O. Mueller. New York: Routledge.

August, D., Carlo, M., Dressler, C., & Snow, C. (2005). The critical role of vocabulary development for English language learners. *Learning Disabilities Research & Practice*, *20*(1), 50-57.

August, D., & Shanahan, T. (Eds.). (2006). *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth*. Mahwah, NJ: Lawrence Erlbaum Associates.

Bailey, A. L., & Butler, F. A. (2003). *An evidentiary framework for operationalizing academic language for broad application to K-12 education: A design document*. Center for the Study of Evaluation, National Center for Research on Evaluation, Standards, and Student Testing, Graduate School of Education & Information Studies, University of California, Los Angeles.

Bailey, A., & Huang, B. (2011). Do current English language development/proficiency standards reflect the English needed for success in schools? *Language Testing*, *28*(3), 343-365.

Basting, S. (2004). Newcomer programs: a literature review. St. Thomas University.

Bauman, J., Boals, T., Cranley, E., Gottlieb, M., & Kenyon, D. (2007). Assessing Comprehension and Communication in English State to State for English Language Learners (ACCESS for ELLs®). In Abedi, J. (Ed.). *English Language Proficiency Assessment in the Nation: Current status and future practice*. Davis: University of California.

Birdsong, D. (2006). Age and second language acquisition and processing: A selective overview. *Language Learning*, *56*(s1), 9-49.

Birdsong, D. (2004). Second language acquisition and ultimate attainment. *The handbook of applied linguistics*, 82-105.

Birdsong, D. (Ed.). (1999). *Second language acquisition and the critical period hypothesis*. Routledge.

Birdsong, D., & Molis, M. (2001). On the evidence for maturational constraints in second language acquisition. *Journal of memory and language*, *44*(2), 235-249.

Boyle, A., Taylor, J., Hurlburt, S., & Soga, K. (2010). Title III accountability: Behind the numbers. Evaluation brief). Washington, DC: American Institutes for Research. Retrieved from http://www.air.org/files/Title_III_Behind_the_Numbers_043010.pdf.

Boyson, B. A., & Short, D. (2003). *Secondary school newcomer programs in the United States* (No. 12). Center for Research on Education, Diversity & Excellence, University of California, Santa Cruz.

Bunch, M. B. (2011). Testing English language learners under no child left behind. *Language Testing*, *28*(3), 323-341.

Burgoyne, U. & Hull, O. (2007). *Classroom management strategies to address the needs of Sudanese refugee learners: support document – methodology and literature review*. The National Centre of Vocational Education Research, September 2007.

Carrion, V.G. & Hull, K. (2009). Treatment manual for trauma-exposed youth: Case studies. *Clinical Child Psychology and Psychiatry, 15*(1), 27-38. DOI: 10.1177/1359104509338150

Chavajay, P., & Rogoff, B. (2002). Schooling and traditional collaborative social organization of problem solving by Mayan mothers and children. *Developmental Psychology*, *38*(1), 55.

Chomsky, N. (1959). A review of BF Skinner's Verbal Behavior. *Language*,*35*(1), 26-58.

Collier, V. P. (1989). How long? A synthesis of research on academic achievement in a second language. *TESOL quarterly*, *23*(3), 509-531.

Columbus City Schools (2015). Columbus Global Academy website. Retrieved from: http://columbusglobalacademy.ccsoh.us/Academics.aspx

Conger, D. (2008). *Testing, time limits, and English learners: does age of school entry affect how quickly students can learn English?* Institute for Education and Social Policy (IESP), New York University. Working paper #08-04, April 2008.

Cook, H. G., Boals, T., & Lundberg, T. (2011). Academic achievement for English learners: What can we reasonably expect? *Phi Delta Kappan*, *93*(3), 66-69.

Cook, H. G., Linquanti, R., Chinen, M., & Jung, H. (2012). National Evaluation of Title III Implementation Supplemental Report: Exploring Approaches to Setting English Language Proficiency Performance Criteria and Monitoring English Learner Progress. Draft. *Office of Planning, Evaluation and Policy Development, US Department of Education*.

Cook, H. G. & Zhao, Y. (2011). How English language proficiency assessments manifest growth: An examination of language proficiency growth in a WIDA state. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA, April 2011.

Cranitch, M. (2010). Developing language and literacy skills to support refugee students in transition from primary to secondary school. *Australian Journal of Language and Literacy*, *33*(3), 255-267.

Crawford, J. (2004). *Educating English learners: Language diversity in the classroom*. Bilingual Education Serv.

Crocker, L., & Algina, J. (1986). *Introduction to classical and modern test theory*. Holt, Rinehart

and Winston: Orlando, FL.

Cummins, J. (1979). Cognitive / academic language proficiency, linguistic interdependence, the optimum age question and some other matters. *Working Papers on Bilingualism*, *19*, 121-129.

Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. *Schooling and language minority students: A theoretical framework*, 3-49.

DeCapua, A., & Marshall, H. W. (2009). Limited formally schooled English language learners in U.S. classrooms. *Urban Review*, *42*, 159-173.

DeCapua, A., & Marshall, H. W. (2010). Serving ELLs with limited or interrupted education: Intervention that works. *TESOL Journal*, *1*, 49-70.

DeCapua, A., & Marshall, H. W. (2011). Reaching ELLs at risk: instruction for students with limited or interrupted formal education. *Preventing School Failure*, *55*(1), 35-41.

DeCapua, A., Smathers, W., & Tang, L. F. (2007). Schooling, Interrupted. *Educational Leadership*, *64*(6), 40-46.

Deville, C., & Chalhoub-Deville, M. (2011). Accountability-assessment under No Child Left Behind: Agenda, practice, and future. *Language Testing*, *28*(3), 307-321.

Diller, K. (1981). "Natural methods of foreign-language teaching" Can they exist? What criteria must they meet? *Annals of the New York Academy of Sciences*, *379*(1), 75-86.

Dulay, H., & Burt, M. (1977). Remarks on creativity in language acquisition. *Viewpoints on English as a second language*, 95-126.

Duncan J (2000), Overview of mental health findings for UAM and separated children interviewed as part of UNHCR best interest determinations. Kahuma Refugee Camp, Kenya.

Echevarria, J., & Graves, A. W. (2007). *Sheltered content instruction: Teaching English language learners with diverse abilities*. Pearson Allyn and Bacon.

Ellen, I. G., O'Regan, K., Schwartz, A. E., Stiefel, L., Neal, D., & Nechyba, T. (2002). Immigrant Children and New York City Schools: Segregation and Its Consequences [with Comments]. *Brookings-Wharton Papers on Urban Affairs*, 183-214.

Ellis, B. H., Miller, A. B., Abdi, S., Barrett, C., Blood, E. A., & Betancourt, T. S. (2013). Multi tier mental health program for refugee youth. *Journal of consulting and clinical psychology*, *81*(1), 129.

Fast, M., Ferrara, S., & Conrad, D. (2004). Current efforts in developing English language proficiency measures as required by NCLB: Description of an 18-state collaboration. Washington, D. C: American Institute for Research.

Fawzi, M. C., Betancourt, T. S., Marcelin, L., Klopner, M., Munir, K., Muriel, A. C., ... & Mukherjee, J. S. (2009). Depression and post-traumatic stress disorder among Haitian immigrant students: implications for access to mental health services and educational programming. *BMC public health*, *9*(1), 482.

Feinberg, R. (2000). Newcomer schools: salvation or segregated oblivion for immigrant students? *Theory Into Practice, 39*(4), 220-227.

Firth, A., & Wagner, J. (1997). On discourse, communication, and (some) fundamental concepts in SLA research. *The Modern Language Journal*, *81*(3), 285-300.

Flege, J. E., Yeni-Komshian, G. H., & Liu, S. (1999). Age constraints on second-language acquisition. *Journal of memory and language*, *41*(1), 78-104.

Fox, J., & Fairbairn, S. (2011). Test Review: ACCESS for ELLs® [R]. *Language Testing*, *28*(3), 425-431.

Frances, D., & Rivera, M. (2007). Principles underlying English language proficiency tests and academic accountability for ELLs. In Abedi, J. (Ed.). *English Language Proficiency*

Assessment in the Nation: Current status and future practice. Davis: University of California.

Freeman, Y., & Freeman, S. (2002). Closing the achievement gap: *How to reach limited formal-schooling and long-term English learners*. Westport, CT: Heinemann.

Friedlander, M. (1991). *The newcomer program: Helping immigrant students succeed in U.S. schools.* (NCELA Program Information Guide Series No. 8). Retrieved August 27, 2004, from National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs Web site: http://www.ncela.gwu.edu/pubs/pigs/pig8.htm

Gersten, R., Baker, S. K., Shanahan, T., Linan-Thompson, S., Collins, P., & Scarcella, R. (2007). Effective Literacy and English Language Instruction for English Learners in the Elementary Grades. IES Practice Guide. NCEE 2007-4011. *What Works Clearinghouse*.

Giambo, D. (2010). High-stakes testing, high school graduation, and limited English proficient students: A case study. American Secondary Education *38*(2), Spring 2010, 44-56.

Gottlieb, M. (2004). *WIDA English Language Proficiency Standards, Kindergarten to Grade 12: Overview*. Madison: State of Wisconsin.

Gottlieb, M., & Kenyon, D. M. (2006). *The Bridge Study between tests of English language proficiency and ACCESS for ELLs®.* WIDA Consortium Technical Report No. 2.

Gottlieb, M., Cranley, M. E., & Cammilleri, A. (2007). *Understanding the WIDA English language proficiency standards: A resource guide*. Madison, WI: Board of Regents of the University of Wisconsin System.

Grabe, W. (1991). Current developments in second language reading research. *TESOL Quarterly*, *25*(3), 375-406.

Grey, M. A. (1992, August). Applying concepts of marginality to secondary ESL programs: Challenges for practitioners and researchers. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on Middle and High School Issues. Available at http://www. ncela.gwu.edu/pubs/symposia/third/index.*

htm. Retrieved on March (Vol. 7, p. 2007).

Hakuta, K., Bialystok, E., & Wiley, E. (2003). Critical evidence a test of the critical-period hypothesis for second-language acquisition. *Psychological Science*, *14*(1), 31-38.

Hakuta, K., Butler, Y., & Witt, D. (2000). How long does it take English learners to attain proficiency? *The University of California Linguistic Minority Research Institute Policy Report 2000-1*. Accessed August, 2007, from http://www.stanford.edu/~hakuta/www/research/publications.html

Hall, E. (1976). *Beyond culture*. New York: Anchor.

Hall, J. K. (1997). A consideration of SLA as a theory of practice: A response to Firth and Wagner. *The Modern Language Journal*, *81*(3), 301-306.

Holmes, J., & Ramos, R. G. (1993). False friends and reckless guessers: Observing cognate recognition strategies. *Second language reading and vocabulary learning. Norwood, NJ: Ablex*, *86108*.

Horsford, S. D., & Sampson, C. (2013). High-ELL-Growth states: Expanding funding equity and opportunity for English language learners. *English Language Learners*, 47.

Howell, D. (2010). *Statistical methods for psychology*. Cengage Learning.

Hyltenstam, K., & Abrahamsson, N. (2003). Maturational constraints in SLA. *The handbook of second language acquisition*, 538-588.

Ibarra, R. (2001). *Beyond affirmative action: Reframing the context of higher education*. Madison, WI: The University of Washington Press.

Johnson, J. S., & Newport, E. L. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive psychology*, *21*(1), 60-99.

Kena, G., Aud, S., Johnson, F., Wang, X., Zhang, J., Rathbun, A., & Kristapovich, P. (2014). The Condition of Education 2014. NCES 2014-083. *National Center for Education Statistics*.

Kentucky Department of Education (2014). ACCESS for ELLs®. Retrieved from

http://education.ky.gov/AA/Assessments/Pages/EL-Testing.aspx

Kentucky Department of Education (2014). Procedures for the inclusion of special populations in the state-required assessment and accountability programs, 703 KAR 5:070. Retrieved from http://education.ky.gov/AA/distsupp/Documents/InclusionReg%20703KAR5070%20Feb2014.pdf

Kentucky Department of Education (2013). Cohort Graduation Rate Information. Retrieved from http://education.ky.gov/AA/Reports/Documents/COHORT%20FAQ%202014.pdf

Kentucky Department of Education (2012). A Guide to the Kentucky System of Interventions. Retrieved from http://education.ky.gov/educational/int/ksi/documents/ksirtiguidancedocument.pdf

Kenyon, D. M. (2006). *Development and Field Test of ACCESS for ELLs®*. WIDA Consortium Technical Report No. 1.

Kenyon, D. M., MacGregor, D., Li, D., & Cook, H. G. (2011). Issues in vertical scaling of a K 12 English language proficiency test. *Language Testing*, *28*(3), 383-400.

Kim, J. (2011). Relationships among and between ELL Status, Demographic Characteristics, Enrollment History, and School Persistence. CRESST Report 810. *National Center for Research on Evaluation, Standards, and Student Testing (CRESST)*.

Klein, J. P., & Moeschberger, M. L. (1997). Survival Analysis. Techniques for Censored and Truncated Data. Springer, New York.

Krashen, S. (1982). *Principles and practice in second language acquisition* (pp. 1982-1982). Pergamon: Oxford.

Larsen-Freeman, D. (2007). Reflecting on the cognitive–social debate in second language acquisition. *The Modern Language Journal*, *91*(s1), 773-787.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge university press.

Leckie, A. G., Kaplan, S. E., & Rubinstein-Ávila, E. (2013). The need for speed: a critical discourse analysis of the reclassification of English language learners in

Arizona. *Language Policy*, *12*(2), 159-176.

Lee, E. T., & Wang, J. (2003). *Statistical methods for survival data analysis* (Vol. 476). John Wiley & Sons.

Lenneberg, E. H. (1967). *Biological foundations of language* (Vol. 68). New York: Wiley.

Liddicoat, A. (1997). Interaction, social structure, and second language use: A response to Firth and Wagner. *The Modern Language Journal*, *81*(3), 313-317.

Linquanti, R., & Cook, H. G. (2013). Toward a" Common Definition of English Learner": A Brief Defining Policy and Technical Issues and Opportunities for State Assessment Consortia. *Council of Chief State School Officers*.

Long, M. H. (1990). Maturational constraints on language development. *Studies in second language acquisition*, *12*(03), 251-285.

Lustig, S. L., Kia-Keating, M., Knight, W. G., Geltman, P., Ellis, H., Kinzie, J. D., ... & Saxe, G. N. (2004). Review of child and adolescent refugee mental health. *Journal of the American Academy of Child & Adolescent Psychiatry*,*43*(1), 24-36.

Marshall, H. (1998). A mutually adaptive learning paradigm for Hmong students. *Cultural Circles*, *3*, 135-149.

McDonnell, L., & Hill, P. T. (1993). *Newcomers in American schools*. Santa Monica, Calif: Rand.

McIntosh, S. (2012). State high school exit exams: A policy in transition. *Center on Education Policy*.

McLaughlin, B., & McLeod, B. (1996, June). Educating all our students: Improving education for children from culturally and linguistically diverse backgrounds. In *Final Report of the National Center for Research on Cultural Diversity and Second Language Learning, 1.* Retrieved from National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs Web site: http://www.ncela.gwu.edu/pubs/ncrcdsll/edall.htm

Menken, K., Kleyn, T., & Chae, N. (2012). Spotlight on "long-term English language learners": Characteristics and prior schooling experiences of an invisible population. *International Multilingual Research Journal*, *6*(2), 121-142.

Menken, K., & Kleyn, T. (2009). The difficult road for long-term English learners. *Educational Leadership*, *66*(7).

Menken, K. (2010). NCLB and English language learners: Challenges and consequences. *Theory Into Practice*, *49*(2), 121-128.

Menken, K. (2009). Policy failures: No child left behind and English language learners. In *Critical pedagogy and teacher education in the neoliberal era* (pp. 49-62). Springer Netherlands.

Menken, K. (2008). *English learners left behind: Standardized testing as language policy*. Clevedon, UK: Multilingual Matters.

Miller, J., Mitchell, J., & Brown, J. (2005). African refugees with interrupted schooling in the high school mainstream: dilemmas for teachers. *Prospect*, *20*(2), 19-32.

Molfese, D. L. (1977). Infant cerebral asymmetry. *Language development and neurological theory*, 21-35.

Mollica, R. F., Poole, C., Son, L., Murray, C. C., & Tor, S. (1997). Effects of war trauma on Cambodian refugee adolescents' functional health and mental health status. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*(8), 1098-1106.

Morse, S. (1997). Unschooled Migrant Youth: characteristics and strategies to serve them. ERIC Digest. Charleston, WV: Office of Educational Research and Improvement (ED). No.. 405158.

National Center for Education Statistics. (2009a). The nation's report card: Mathematics 2009 (NCES 2010–451). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

National Center for Education Statistics (2009b). The nation's report card: Reading 2009 (NCES

2010–458). Washington, DC: Institute of Education Sciences, U.S. Department of Education.

National Center for Education Statistics. (2014). *The condition of education, English language learners in public schools, 2014*. Retrieved from *http://nces.ed.gov/fastfacts/display.asp?id=96*

National Center for Education Statistics. (2012). *The condition of education, status drop-out rates*. Retrieved from http://nces.ed.gov/programs/coe/indicator_coj.asp

National Center for Education Statistics. (2014). *The Nation's Report Card*. Retrieved from http://nces.ed.gov/nationsreportcard/

The National Clearinghouse for English Language Acquisition (NCLEA). 2006. *The Growing Number of Limited English Proficient Students*. Washington, DC: The U. S. Department of Education.

National Institute of Child Health and Human Development (NICHD). (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U. S. Department of Health and Human Services.

New York State Department of Education, Guidelines for Education Limited English Proficient Students with Interrupted Formal Education (LEP/ELL, SIFES). http://www.p12.nysed.gov/biling/docs/NYSEDSIFEGuidelines.pdf

New York State Department of Education, Office of Bilingual Education and World Languages, Promising Instructional Practices for Secondary English Learners (7-12). Retrieved from http://www.p12.nysed.gov/biling/bilinged/GuidanceDocuments.htm

Newman, J. (2005). Protection through participation: young people affected by forced migration and political crisis. *Refugee Studies Centre Working Paper No. 20*.

No Child Left Behind Act of 2001. Public Law No. 107-110, 115 Stat. 1425 (2002).

Parker, C. E., Louie, J., & O'Dwyer, L. (2009). New Measures of English Language Proficiency

and Their Relationship to Performance on Large-Scale Content Assessments. Issues & Answers. REL 2009-No. 066. *Regional Educational Laboratory Northeast & Islands*.

Penfield, W., & Roberts, L. (1959). Speech and brain mechanisms.

Portes, A., & Schauffler, R. (1994). Language and the second generation: Bilingualism yesterday and today. *International migration review*, 640-661.

Office of English Language Acquisition, U.S. Department of Education (OELA). (2008). Notice of Final Interpretation on Annual Measurable Achievement Objectives (AMAOs). Federal Register: October 17, 2008 (Volume 73, Number 202). Retrieved from www2.ed.gov/legislation/FedRegister/other/2008-4/101708a.html

Office of the United Nations High Commissioner of Refugees, (2013). Figures at a Glance. Retrieved from http://www.unhcr.org/pages/49c3646c11.html

Office of Refugee Resettlement, United States Department of Health and Human Services, (2012). Fiscal Year 2012 Refugee Arrivals. Retrieved from https://www.acf.hhs.gov/sites/default/files/orr/fy_2012_orr_report_to_congress_final_041014.pdf

Olsen, L. (1996). From Nation to Race: The Americanization of Immigrants in a High School of the 1990s.

O'Sullivan, K. (2006). Late arrivals: the needs of refugee young people who settle in later adolescence. *Center for Multicultural Youth Issues Paper*.

Parker, C. E., Louie, J., & O'Dwyer, L. (2009). New Measures of English Language Proficiency and Their Relationship to Performance on Large-Scale Content Assessments. Issues & Answers. REL 2009-No. 066. *Regional Educational Laboratory Northeast & Islands*.

Peregoy, & Boyle, (2000). *Reading, writing, and learning in ESL: A resource book for K-12 teachers* (5th ed.). NY: Addison-Wesley.

Perkins, L.M. (2000). The new immigrants and education: Challenges and issues. *Educational Horizons, 78*(2), 67-71.

Randall, L. A. (2013). *Educating English Learners in Non-Gateway Districts: Teachers'*

Perspectives, Practices, and Professional Preparation (Doctoral dissertation, The University of Wisconsin - Madison).

Reutzel, D., & Cooter Jr, R. B. (2007). *Strategies for reading assessment and instruction: Helping every child succeed*. International Reading Association. 800 Barksdale Road, PO Box 8139, Newark, DE 19714-8139.

Reutzel, D. R., & Cooter, R. B. (2008). *The essentials of teaching children to read*. Upper Saddle River, NJ: Merrill/Prentice Hall.

Rong, X. L., & Preissle, J. (2009). *Educating immigrant students in the 21st century: What educators need to know*. Thousand Oaks, CA: Corwin Press.

Rothe, E. M., Lewis, J., Castillo-Matos, H., Martinez, O., Busquets, R., & Martinez, I. (2002). Posttraumatic stress disorder among Cuban children and adolescents after release from a refugee camp. *Psychiatric Services*, *53*(8), 970-976.

Ruben, R. J. (1997). A time frame of critical/sensitive periods of language development. *Acta oto-laryngologica*, *117*(2), 202-205.

Ruiz-de-Velasco, J., Fix, M. (2000). Overlooked and underserved: Immigrant students in US secondary schools.

Ryan, C. (2013). Language use in the United States: 2011. PDF). American Community Survey. US Census Bureau. Retrieved, 08-11.

Scarcella, R. (2003). Academic English: A conceptual framework.

School system data source 1 (2014). Data Management, Planning, and Program Evaluation Division, Jefferson County Public Schools Databooks.

School system data source 2 (2015). Exceptional Child Education. Retrieved from: http://www.jefferson.kyschools.us/Programs/ECE/index.html

Scovel, T. (1988). *A time to speak: A psycholinguistic inquiry into the critical period for human*

speech. Rowley, MA: Newbury House.

Seliger, H. W. (1978). Implications of a multiple critical periods hypothesis for second language learning. *Second language acquisition research: Issues and implications*, 11-19.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Wadsworth Cengage learning.

Short, D.J. (1998). *Secondary newcomer programs: Helping recent immigrants prepare for school success.* Washington, DC: Center for Applied Linguistics. (ERIC Document Reproduction Service No. ED419385)

Short, D. (2002). Newcomer programs: An educational alternative for secondary immigrant students. *Education and Urban Society*, *34*, 173-198.

Short, D. J., & Boyson, B. A. (2012). Helping newcomer students succeed in secondary schools and beyond. *Washington, DC: Center for Applied Linguistics. Retrieved from http://www. cal. org/pdfs/newcomer/helping-newcomer-students-succeed in-secondary-schools-and-beyond. pdf*.

Short, D. J., Boyson, B. A., & Coltrane, B. (2003). Final project report: First National Conference for Educators of Newcomer Students and pilot study on newcomer program literacy and assessment practices. *Washington, DC: Center for Applied Linguistics*.

Singleton, D. (2005). The Critical Period Hypothesis: A coat of many colours. *International Review of Applied Linguistics in Language Teaching*, *43*(4), 269-285.

Spada, N., & Lightbown, P. M. (1999). Instruction, first language influence, and developmental readiness in second language acquisition. *The Modern Language Journal*, *83*(1), 1-22.

Tabachnick, B.G., & Fidell, L.S. (2007). Using Multivariate Statistics (5th ed.). New York: Allyn and Bacon.

Taylor, P., Lopez, M. H., Martínez, J. H., & Velasco, G. (2012). When labels don't fit: Hispanics and their views of identity. *Pew Hispanic Center*, *4*.

Tukey, J. W. (1977). *Exploratory data analysis*. Reading, MA: Addison-Wesley.

U. S. Department of Education, National Center for Education Statistics. (2012). *The Condition of Education 2012* (NCES 2012-045), Indicator 33.

U. S. Department of Education, English Language Learners. (2013). Retrieved from https://www2.ed.gov/about/overview/budget/budget13/crosscuttingissues/englishlearners.pdf

U. S. Department of Education, No Child Left Behind. (2014). *Fact Sheet: NCLB Provisions Ensure Flexibility and Accountability for Limited English Proficient Students*. Retrieved from http://www2.ed.gov/nclb/accountability/schools/factsheet-english.html

Unruh, S. (2011). Mexico's violence and posttraumatic stress disorder in immigrant children: a call for collaboration among educators. *The Journal of Multiculturalism in Education*, *7*, 1-16.

Vanhove, J. (2013). The critical period hypothesis in second language acquisition: A statistical critique and a reanalysis. *PloS one*, *8*(7), e69172.

Verhoeven, L. (2011). Second language reading acquisition. In M. L. Kamil, P. D. Pearson, E. B. Moje, & P. P. Afflerbach (Eds.), *Handbook of Reading Research*, *4*, 661-683.

Vygotsky, L. S. (1967). Play and its role in the mental development of the child. *Journal of Russian and East European Psychology*, *5*(3), 6-18.

Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children*, *23*(3), 34-41.

Weroha, S. & Aphayrath, B.N. (2004). *School district information packet about Hmong refugee students.* Retrieved from Wisconsin Department of Instruction Web site: http://www.dpi.state.wi.us/ell/pdf/hmgpkt.pdf

WIDA Consortium, Who we are & our history. 2014. Retrieved from http://www.wida.us/aboutus/mission.aspx

WIDA Consortium. (2012). Amplification of the English Language Development Standards, Kindergarten–Grade 12.

Williams, C. L., & Westermeyer, J. E. (1986). *Refugee mental health in resettlement countries*.

Hemisphere Publishing Corp.

Yanosky, T., Yen, S. J., Louguit, M., MacGregor, D., Zhang, Y., & Kenyon, D. M. (2011). Annual Technical Report for ACCESS for ELLs®®® English Language Proficiency Test, Series 201, 2009-2010 Administration. *WIDA Consortium.* Retrieved January, 4, 2012.

Yanosky, T., Amos, M., Cameron, C., Louguit, M., MacGregor, D., Yen, S., & Kenyon, D. (2013). Annual Technical Report for ACCESS for ELLs® English Language Proficiency Test, Series 203, 2011-2012 Administration. *WIDA Consortium*. Retrieved June, 3, 2013.

Yehuda, R. (2002). Post-traumatic stress disorder. *New England Journal of Medicine*, *346*(2), 108-114.

Zehler, A. M., Adger, C., Coburn, C., Arteagoitia, I., Williams, K., & Jacobson, L. (2008). Preparing to Serve English Language Learner Students: School Districts with Emerging English Language Learner Communities. Issues & Answers. REL 2008-No. 049. *Regional Educational Laboratory Appalachia*.

Appendix

Most Recent Composite for all ELL students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.6	1	.1	.1	.1
	1.7	7	.4	.4	.4
	1.8	10	.5	.5	1.0
	1.9	56	3.0	3.0	3.9
	2.0	11	.6	.6	4.5
	2.1	18	1.0	1.0	5.5
	2.2	21	1.1	1.1	6.6
	2.3	24	1.3	1.3	7.9
	2.4	33	1.8	1.8	9.7
	2.5	22	1.2	1.2	10.8
	2.6	43	2.3	2.3	13.1
	2.7	24	1.3	1.3	14.4
	2.8	47	2.5	2.5	16.9
	2.9	79	4.2	4.2	21.1
	3.0	36	1.9	1.9	23.0
	3.1	42	2.2	2.2	25.3
	3.2	32	1.7	1.7	27.0
	3.3	41	2.2	2.2	29.2
	3.4	37	2.0	2.0	31.1
	3.5	64	3.4	3.4	34.6
	3.6	43	2.3	2.3	36.9
	3.7	40	2.1	2.1	39.0
	3.8	57	3.0	3.0	42.0
	3.9	82	4.4	4.4	46.4
	4.0	26	1.4	1.4	47.8
	4.1	53	2.8	2.8	50.6
	4.2	43	2.3	2.3	52.9
	4.3	42	2.2	2.2	55.1
	4.4	50	2.7	2.7	57.8
	4.5	40	2.1	2.1	59.9
	4.6	61	3.2	3.3	63.2
	4.7	22	1.2	1.2	64.4

	4.8	36	1.9	1.9	66.3
	4.9	58	3.1	3.1	69.4
	5.0	48	2.6	2.6	71.9
	5.1	81	4.3	4.3	76.3
	5.2	73	3.9	3.9	80.2
	5.3	43	2.3	2.3	82.5
	5.4	57	3.0	3.0	85.5
	5.5	22	1.2	1.2	86.7
	5.6	58	3.1	3.1	89.8
	5.7	34	1.8	1.8	91.6
	5.8	34	1.8	1.8	93.4
	5.9	30	1.6	1.6	95.0
	6.0	94	5.0	5.0	100.0
	Total	1875	99.8	100.0	
Missing	System	3	.2		
Total		1878	100.0		