APPROVAL SHEET

Title of Dissertation: ENGLISH LEARNERS WITH LIMITED OR INTERRUPTED FORMAL EDUCATION: RISK AND RESILIENCE IN EDUCATIONAL OUTCOMES

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Doctor of Philosophy, 2014

Dissertation and Abstract Approved: _____
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Maryland State Department of Education.

Maryland State ESOL/K-12 Teachers' Certification.
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University of Maryland, Baltimore County, Baltimore, Maryland.

Ed.M.A. in Teaching English to Speakers of Other Languages.
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State University of New York at Buffalo, Buffalo, New York.

B.A. in Political Science.
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State University of New York at Fredonia, Fredonia, New York.

Publications and Presentations.

Browder, C. (forthcoming 2014). The educational outcomes of U.S. high school English learner students with limited or interrupted formal education. In *Low-educated Second Language and Literacy Acquisition Proceedings of Symposium, 2013*.

Browder, C. (2014). Do high school English learners' previous formal schooling backgrounds affect their English proficiency gains? In A. DeCapua's (Organizer) & E. Tarone's (Discussant) colloquium: Understanding language learning among students with limited or interrupted formal education (SLIFE). *American Association of Applied Linguistics (AAAL) 2014 Conference*. Portland, OR: Portland Marriot, Downtown Waterfront.

Browder, C. (2013). At risk? Examining the educational outcomes of SIFEs. Paper presented at *Low-educated Adult Second Language Literacy Acquisition 2013 (LESLLA) Symposium*. San Francisco, CA: City College of San Francisco, Mission Campus.

Browder, C. (2013). Risk and Resilience: A quantitative study using school system data and student surveys to examine factors associated with the educational outcomes of high school ELs. Presentation in *MDTESOL Fall Conference*. Essex, MD: Community College of Baltimore County, Essex Campus.

Shin, J., Edmonds, L., & Browder, C. (2011). Collaboration is the key to successful professional development: The STEP T for ELLs program in Maryland. In C. Casteel and K. Gebbie Ballantyne (Eds.) *Professional development in action: Improving teaching for English language learners*. National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs, George Washington University, Washington, DC.

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Browder, C. (2010). Vocabulary development in content courses. A presentation for Howard County Public School System social studies and special education teachers, Columbia, MD.

Crandall, J., Edmonds, L., Browder, C., Quinn, J., & Girardi, R. (2009). Teaching content to ELLs: Collaboration between universities and schools. Symposium at *the 2009 National Conference for Language Teacher Education.* Washington, DC.

Browder, C. (2009). Developing ELLs' literacy and vocabulary in social studies courses. A presentation for Talbot County School System social studies teachers, Easton, MD.

Browder, C. (2009). Developing ELLs' literacy in social studies courses. A presentation for Talbot County School System ESOL teachers, Easton, MD.

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Shin, J., Edmonds, L., & Browder, C. (2008). Teaching social studies to English language learners. Presentation at the *2008 Annual Convention of the National Council of Social Studies Teachers*, Houston, TX.

Browder, C. (2008). Researching English language learners with interrupted and limited-formal schooling. Paper presented at the *International TESOL Convention 2008*, New York, NY.

Browder, C. (2007). Researching English language learners with interrupted and limited-formal schooling. Paper presented at *Maryland TESOL Convention 2007*, Annapolis, MD.

Browder, C. (2003). Voices against injustice. *The Change Agent: Adult Education for Social Justice: News, Issues & Ideas, 16*, p. 17.

Professional Assignments

Full-time, Tenured, ESOL Teacher and Department Coordinator.
February, 2003 to present
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Howard County Public School System, Ellicott City, MD

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University of Maryland, Baltimore County, Baltimore, MD

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Language, Literacy, and Culture Doctoral Program

- Dissertation coursework: Writing, Research, & Proposal
- LLC Internship (with HCPSS ESOL Program Coordinator, Laura Hook)
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- Quantitative Research Methods II
- Discourse Analysis
- Quantitative Research Methods I
- Directed Independent Study
- Methods of LLC Research
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- Introduction to Language, Literacy, and Culture A
- Intercultural Pragmatics
- Constructing, Race, Class and Gender

Howard County Department of Education, Ellicott City, MD.

- Grant Writing for Teachers
- Reading Apprenticeship Summer Workshop

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Maryland K-12 ESOL/Bilingual Teacher Certification

- Instructional Systems Development
- Teaching Reading and Writing to ESOL/Bilingual Students
- ESOL Student Teaching Internship

American University, Washington, DC.

Summer TESOL Workshops

- Developing EFL Teacher-training Programs

State University of New York at Buffalo, Amherst, NY.

Graduate School of Education, TESOL Program

- TESOL Practicum
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- Psychology of Learning and Instruction
- Internet Assisted Language Learning and Web Page design
- Teaching Writing in a Second Language
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Abstract

Title of Document:	ENGLISH LEARNERS WITH LIMITED OR INTERRUPTED FORMAL EDUCATION: RISK AND RESILIENCE IN EDUCATIONAL OUTCOMES
	Christopher Todd Browder, Doctor of Philosophy, 2014
Directed By:	Assistant Professor Dr. Claudia Galindo, of the Language, Literacy, and Culture Program

This dissertation examined the educational outcomes of high school English learner (EL) students with limited or interrupted formal education (SLIFE) to evaluate theories that explain their educational resilience. School system data and survey results from 165 high school ELs were analyzed to determine the degree to which ELs' homeland schooling had influenced their academic outcomes in the U.S. Educational outcomes included English proficiency attainment and gains as well as scores on standardized tests of algebra, biology, and English language arts. Limited formal schooling (LFS) was operationalized with three indicators for students on arrival in the U.S.: (1) gaps in years of schooling relative to grade, (2) low self-reported first language schooling, and (3) beginner-level English proficiency. Bivariate and multivariate regression analyses were used to estimate the relationships between the LFS indicators and the educational outcomes as well as the degree to which school-based protective factors and personal risk factors had influenced the relationships. Protective factors included perceived pedagogical caring, social integration with non-immigrant peers, ESOL classes, out-of-school help, and extra-

curricular activities. Risk factors included high social distance, past traumatic experiences, a lack of authoritative parental support, separations from loved ones, and hours spent working in employment. This study also examined the role students' academic self-concept played in mediating and moderating the influence of protective and risk factors in the resiliency process. The findings showed that SLIFE had lower achievement on the standardized tests, but that it was largely due to having lower English proficiency at the time of the test. Lower English proficiency at the time of the test was mainly attributed to arriving with lower English proficiency and lower first language literacy. ESOL classes appeared to help students acquire English faster. After controlling for differences in English proficiency, students' perceptions of social distance appeared to predict their academic achievement on standardized tests better than their academic self-concept and the other protective or risk factors. This study contributes to our understanding of risk and resilience among SLIFE and may help inform interventions to support them better.

KEYWORDS: English learners, EL, English language learners, ELL, students with limited or interrupted formal education, SLIFE, SIFE, limited formal schooling, LFS, educational outcomes, academic achievement, standardized tests, English language acquisition, resilience, high school, ESOL classes, social distance, trauma

ENGLISH LEARNERS WITH LIMITED OR INTERRUPTED FORMAL EDUCATION: RISK AND RESILIENCE IN EDUCATIONAL OUTCOMES

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Foreword

When I first started teaching English to speakers of other languages (ESOL) in the U.S. public schools over eleven years ago, I thought that I was an expert teacher who already knew most of what he needed to know. I had about ten years of experience teaching English as a foreign language (EFL) overseas, a Masters in Education, and two years of experience training other EFL teachers.

Much to my dismay, however, teaching in the U.S. public schools was like starting all over. I had to relearn teaching because the students and their contexts were entirely different from what I was accustomed. The English learner students (ELs) in the U.S. were so different from those I had taught overseas.

In particular, for the first time in my life, I was encountering students who had learned how to chat informally in accent-free English like any other American high school student, but who lacked the skills needed to complete typical low-beginner level ESOL activities. In their failed and belabored efforts, I noticed backwards letters, missing punctuation, and other signs of low literacy. I became aware that some of my students had come to the U.S. without the benefits of adequate previous formal schooling and literacy in their homeland. At the same time, I was learning that some of my students had been separated from their parents for so long that the parents with whom they had only recently been reunited were near strangers. I was also learning the unimaginable tragedies and traumatic events some had experienced. Students showed me bullet wounds and other scars on their bodies and told me of their time as child soldiers or terrifying experiences being separated from their

families while fleeing from violence during civil war. I was shocked and appalled by the new world I was waking up to, and I didn't know what to do, but I was ready to start learning.

Thus, while working as a public school ESOL teacher, I started my doctoral coursework and began my research on English learner students with limited or interrupted formal education (SLIFE). For my first study, I needed to operationalize SLIFE so I could identify students for a SLIFE subgroup and compare them to ELs who were not SLIFE. To learn more about the students with whom I had access for that study, I contacted their teachers from the previous year when they were in the county's Newcomer Program. When I asked those teachers to tell me what the students were like when they first arrived, I was very surprised by what I learned. I learned that some of the students I had assumed were SLIFE based on their performance in my classes had not actually experienced any interruptions in their schooling before coming to the U.S. In contrast, some of the students that I had not thought were SLIFE had arrived with many years of missing schooling, low first language literacy, and very low math skills. Somehow, those students were performing very well in their high school classes after only a year or two of support from the Newcomer Program.

These realizations made me become even more fascinated with SLIFE. What exactly is a SLIFE? How do we identify a SLIFE? Do we identify them by a lack of time spent in school, or do we identify them by a lack of grade-level skills and knowledge? Why were some students less educated than others regardless of having

schooling without interruptions? Why were some students more educated than others despite having lengthy interruptions in their schooling?

Those questions led me to my dissertation research, which took me four years in addition to my Ph.D. coursework. Now that it is completed, I have spent a total of eleven years working in the U.S. public school system. In that time, I have had the pleasure of watching many of my students, who would be considered SLIFE by most researchers, become proficient in English, meet state graduation standards on tests of Algebra, Biology, and English, complete challenging high school classes, and graduate from high school. Many of those students are currently attending college and some have already graduated and entered the workforce.

As these students learned from me, I too learned from them. They showed me that some people who lack formal schooling can be very well educated. They also showed me that it is possible for highly-motivated students to make up for many years of missing or inadequate schooling in a very short time when given help. They showed me that SLIFE in U.S. public schools are not in a hopeless situation but indeed benefit from the help them receive. I am happy that I have had the opportunity to share their journey with them, and so, it is with great pleasure and pride that I share this dissertation with readers.

Dedication

I dedicate this dissertation to the students I have known who succeeded in doing what seemed impossible---overcoming low literacy, limited English, and many missing years of schooling to graduate from high school when given only four years to do so. I also dedicate this dissertation to the students who didn't. I remember you all fondly. I am proud of you, and I thank you for the opportunity to witness your greatness. May success come to you all in many different forms.

Acknowledgements

This dissertation would not exist if not for the help I received from a multitude of people in my personal, academic, and professional life and if not for the cooperation of the students who participated in this study.

Like most people, I am what I am because of my family. My wife, for instance, inspired me and pushed me to continue my education when I would not have done so otherwise. My mother and father gave me the financial support I needed for my education without ever once complaining about how much it was taking from their life savings. Without my family, I would not have even started this work, let alone finished it.

This dissertation also reflects the many people in academia with whom I have been lucky enough to have some association. Firstly, there was Ron Schwartz who encouraged me to come to UMBC for a Ph.D. but told me I should get some U.S. public school experience first. Then there was Dr. Denis Provencher, who understood my work, saw its value, and helped me get into the doctoral program when I was still a non-matriculated student. There was Dr. Beverly Bickel, who made me feel like I belonged in the program and like I had something valuable to contribute when I was a new student. I was also very fortunate to work with Dr. JoAnn Crandall before her retirement. Dr. Crandall was one of the first researchers in the TESOL field to write articles recognizing the existence of English learner students with limited or interrupted formal education in U.S. public schools. Her guidance in this dissertation was a great honor and greatly improved the quality of my work. I

was also very lucky that Dr. Martha Bigelow was willing to work with me on my research although she was at a different university far away. Dr. Bigelow is one of the leading researchers on second language acquisition for low-educated and low-literate English learners. More importantly, however, she is a wonderful human being who welcomed me to her international community of researchers. Within that community I have been fortunate to discuss my work with some of the most important people doing research on low-educated and low-literate second language learners, people such as Dr. Andrea DeCapua and Dr. Elaine Tarone. Finally, there were the people who agreed to be readers and lend their expertise and insight. Those people included Dr. John Nelson, a public school data veteran, and my old friend Dr. Joan Kang Shin, who manages programs and writes books for training ESOL teachers.

Of course the contributions all these people made to my dissertation pale in comparison to those of my advisor, Dr. Claudia Galindo. She guided me closely to complete a dissertation that began very overly-ambitious and unfocused. Dr. Galindo invested an astounding amount of her time and labor into this dissertation. She supported me to correctly use quantitative methods and accurately describe and discuss my findings. Ultimately, it was her suggestions for revisions and edits that made this dissertation readable. This dissertation very much reflects the dedication Dr. Galindo has to her students and to high-quality educational research.

This dissertation is more than just the accomplishment of an individual and his academic community, however. This dissertation also required the help and cooperation of multitudes of people in the public school system. For instance, there

was the ESOL Program Coordinator, Laura Hook, a “yes-person” in a career that does not reward “yes.” Without her, I would have never been given permission to conduct my research. There were also the ESOL teachers and the other county employees who gave their time without compensation, tolerated my disruptions, returned emails in a timely fashion, and gave up precious instructional time. Last, but not least, there were all the students who agreed to participate in the study and their parents who consented to allow them. They sat through a long survey and gave their best answers. As a researcher visiting their schools, I was impressed by how warmly those students greeted me and how much they appreciated that I was interested in learning more about them. Without them I would have absolutely nothing for you to read.

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Acronyms

ESOL English for Speakers of Other Languages (see page 15)

EL English learner (see page 15)

LEP Limited English proficiency (see page 15)

LFS Limited formal schooling (see page 16)

SLIFE Student with limited or interrupted formal education (see page 17)

HSA High School Assessment (see page 19)

L1 First language (see page 19)

Chapter 1: Introduction.

1.1. Background.

For the past four decades, the United States has been experiencing a major period of immigration. The U.S. Census Bureau has estimated that there are around 40 million immigrants living in the United States, which accounts for nearly fourteen percent of the total U.S. population (Walters & Trevelyan, 2011). Moreover, Americans have seen the face of their nation change as more immigrants arrive from Latin America, Africa, Asia, and the Caribbean instead of from mostly European nations as they had in the past (Passel & Fix, 1994). Some Americans have embraced this new diversity, but others see it as a problem and have formed an anti-immigration movement to slow down, or alter the characteristics of, the flow of immigrants into the U.S. (Political Research Associates, 2013).

Just as the media can influence Americans' views on immigration (Wilson, 2009; Passel & Fix, 1994), so too can reports on the educational outcomes of immigrant children (Contreras, 2010). Reports about low academic performance among immigrant children may be used by the anti-immigration movement as a justification for changing immigration policies. If people can argue that children of immigrants are somehow hurting our schools or are underperforming enough to give the U.S. some sort of competitive disadvantage against other developed nations, then they can also argue that children of immigrants are a "problem" for our nation. Some may also argue that the money spent on educating children of immigrants is an unwarranted financial burden on the U.S. with few returns for the U.S. economy or

that the money would be better spent on providing services to improve education for other at-risk student groups.

Unfortunately, the U.S. government's current system of reporting the achievement of immigrant adolescents portrays their outcomes negatively by framing them as an underachieving group (Contreras, 2010). A particularly important group showing supposedly poor educational outcomes are immigrant adolescents classified as English learners (ELs). The negative portrayal of the academic outcomes of ELs is due to the fact that their achievement is evaluated only by how well they fare on standardized tests written only in English in relation to their white, middle-class, English-speaking student counterparts. Rarely is their achievement evaluated by how much progress they have made since entering the U.S. school system. The evaluation of the academic performance of ELs generally does not factor in these students' initial English abilities or academic levels when they first entered the country. ELs who arrive with little formal schooling, low first language literacy, and/or low English proficiency are expected to meet the same standards as the average native-born student regardless of how little time they have spent in the U.S. Furthermore, when an EL has made enough progress in English to be considered proficient, and is now more capabale of earning higher scores on these standardized tests, that student is removed from the EL subgroup and his/her achievement is no longer included in the data for ELs (Duran, 2008). Due to this, the EL data will always reflect the achievement of those who have not yet met standards and will always exclude those who have, and therefore, will always show a failure to meet standards. The result of this system of evaluation is that ELs are often labeled "low achieving" when they do

not meet normative standards, even if they make better progress in the assessed areas than non-ELs.

It is within this social-educational context that I frame my dissertation work. I assert that we need more and higher quality research that examines the academic achievement of ELs in terms of the academic progress they make over time and recognizes the resilience they show in overcoming challenges that normally predict poor educational outcomes in the mainstream student population. This type of research will better inform the education debate and educational policies for ELs.

Regardless of our feelings about immigration, it is imperative that immigrant students classified as ELs receive a high-quality education that will provide them with the required tools to succeed in life if they are to be the future of the U.S. and the world. According to reports from the U.S. Department of Education, the number of children classified as ELs in U.S. public schools increased by 51% from 1997 to 2009 at a time in which the general enrollment increased by only 7% (National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs, 2011). The same data show that some states experienced even more intense rates of growth during that period. The number of children classified as ELs in South Carolina, for example, increased by over 800% (Batalova & McHugh, 2010). Nationwide, nearly 11% of all public school students are ELs, but in some states the proportion is much higher, including California for example, in which 23% of all students (almost 1.5 million) are classified as ELs.

Although some ELs arrive in the U.S. with previous formal schooling that makes them very well prepared for U.S. public schools, others arrive with limited or

no formal schooling (LFS), and therefore start their U.S. schooling with a significant disadvantage. Some researchers have begun to refer to this type of EL by the acronym SLIFE, or student with limited or interrupted formal education (DeCapua & Marshall, 2010). It is difficult to know exactly how many adolescent ELs arrive in the U.S. as SLIFE since the U.S. Department of Education does not require state departments of education to keep a count of this type of student (Covington, 2008). However, some researchers estimate that SLIFE account for 10% (Zehr, 2009), 15% (Walsh, 1999), or even 20% (Ruiz-de-Valasco & Fix, 2000) of all ELs.[1] The New York State Department of Education once estimated, for example, that 13% of its ELs arrive with LFS (DeCapua, Smathers, & Tang, 2007). Estimates from California and Maryland have placed the rate at 20% (Ruiz-de-Velasco & Fix, 2000). One nationwide survey of programs that serve ELs showed that many high school ELs could be classified as SLIFE as 20% of the ELs in the study had missed more than two years of schooling since age six, 27% were at least two years below grade level for their age, and 38% had very limited first language literacy (Fleischman & Hopstock, 1993). Missing years of schooling, below-grade-level academics, and limited first language literary have been used as indicators of LFS (New York State Department of Education, 2011).

Many researchers and advocacy groups have also claimed that the number of SLIFE is growing faster than that of the general EL population (Advocates for Children of New York, 2010; Freeman, Freeman, & Mercuri, 2001; Short D. , 2002; Ruiz-de-Valasco & Fix, 2000). This would make sense considering that, over the

[1] It is important to note that, since there is no unified standard for identifying LFS. Students counted as SLIFE in one study may not be counted as such in another.

past two decades, the number of low-schooled immigrants entering the U.S. has been increasing faster than the number of well-schooled immigrants (U.S. Census Bureau, 2007; Greenberg, Maclas, Rhodes, & Chan, 2001). This may be largely due to the fact that children around the world today are less likely to be in school than children were twenty years ago (United Nations International Children's Fund, 2011) and the immigrants entering the U.S. today are more likely to come from less developed countries with weaker public education systems than they were twenty years ago (Ruiz-de-Velasco & Fix, 2000). Many countries around the world offer no free public education above grade six and many offer only half days in very under-resourced programs (Flaitz, 2006). Even when free public education is available, children may not be able to attend school if they live in rural areas with no schools, if they must work to support their families, or if their schooling is disrupted by strife or natural disaster (United Nations International Children's Fund, 2011). In many nations worldwide, the percentage of children attending school after grade six is well below fifty percent (based on UNESCO data presented by The Southern and Eastern Africa Consortium for Monitoring Educational Quality, 2014). In fact, a researcher in the New York City Public Schools once estimated that 45-75% of the immigrant adolescents arriving from certain war-torn or highly impoverished nations such as Liberia, Burma, Haiti, or Honduras had LFS (Walsh, 1999).

Researchers and policy-makers have deemed SLIFE to be at-risk for academic failure when they begin their schooling in the U.S. because they are academically underprepared and need so much support that they are unlikely to receive from most schools (Advocates for Children of New York, 2010; Walsh, 1999; Siu, 1996; Short

& Boyson, 2012). At the same time, we know little about how to best serve SLIFE since there is very little research on this population (DeCapua, Smathers, & Tang, 2010; Tarone, Bigelow, & Hansen, 2009; Tarone, 2010; Zehr, 2009). We do, however, know that some SLIFE succeed in eventually functioning on grade level, graduating from high school, and attending college despite being burdened with such overwhelming challenges (Bartlett, 2007; Bigelow, 2007; Short, Boyson, & Coltrane, 2003; Tellez & Walker de Felix, 1993; Walsh, 1999; Zehr, 2009).

1.2. A Brief Description of this Study.

This study implemented quantitative research aimed at understanding resilience among high school SLIFE by examining their schooling experiences in the U.S. To do so, I merged school district student-level data with student survey data I collected in order to examine the educational experiences and outcomes of 165 high school students classified as ELs. The participating public school district was predominantly suburban, well-resourced, located in an area of the east coast close to Washington D.C., and nationally known for its high-achieving schools (Maryland State Department of Education, 2013; U.S. News and World Report, 2013). I henceforth refer to this public school district by the pseudonym, "Rainbow County," due to its reputation for racial and ethnic diversity and integration.

All participating students were classified as ELs at the time the data was collected, but only some had indicators of LFS that would identify them as SLIFE. In Rainbow County, students were classified as ELs based on a standardized test of English proficiency called the LAS Links, which was given when they initially enrolled in a public school in the district (Maryland State Department of Education,

2013). At the end of each year, students were retested to determine whether they would continue to be classified as ELs or whether they would be reclassified. LFS in this study was operationalized as a continuous variable comprised of three indicators students had on arrival in the U.S., namely, *schooling gaps*, *low L1*[2] *literacy*, and *beginner English proficiency* (These variables are explained in the methods section on page 106). Since the LFS indicators were all conditions on arrival, students differed in the degree to which they had overcome the disadvantages inherent in those conditions by the time they participated in the study. As *LFS* was a continuous variable in this study, it was not a classification to which a student belonged, but a risk factor of which student could have more or less. *SLIFE*, however, was operationalized as a dichotomous, or "dummy," variable that identified students who had two or more of the LFS indicators on arrival.

1.2.1. Research Questions.

This study can be considered resilience research since it sought to go beyond presenting generalizations about the poor educational outcomes of an at-risk group, and instead attempted to ascertain how some members of that group overcame their disadvantages to have desirable educational outcomes (Luthar, Cicchetti, & Becker, 2000). To do so, it attempted to answer the following research questions:

1. How prevalent was LFS on arrival among high school students classified as ELs in Rainbow County?
2. To what extent was LFS on arrival associated with educational outcomes for high school students classified as ELs in Rainbow County?

[2] The acronym L1 is being used in this study to refer to the students' first languages or languages of previous formal schooling and literacy in their homeland.

3. Were school-related protective factors and personal risk factors more or less prevalent for SLIFE than for the other students classified as ELs in Rainbow County?
4. What protective and risk factors influenced the educational outcomes of SLIFE in Rainbow County?
5. How did academic self-concept moderate or mediate the relationship between protective and risk factors and the educational outcomes of ELs in Rainbow County?

1.2.2. Theoretical Framework.

This study builds on academic resilience and motivation theories. Academic resilience in this study is defined as the attainment of desirable academic outcomes or trajectories when the presence of risk variables might normally predict otherwise (Wang & Gordon, 1994; Gordon Rouse, 2001; Gordon Rouse & Cashin, 2000; Alva & Padilla, 1995; Perez, Espinoza, Ramos, Coronado, & Cortes, 2009). Academic resilience is a situated and temporary form of resilience that need not correspond with resilience in non-academic areas of life (Luthar, Cicchetti, & Becker, 2000). Therefore, a person may be socially incompetent but academically resilient or academically resilient at one time but not at another. Academic resilience is defined in relation to "risk factors." A risk factor[3] in resilience research can be defined as "a psychosocial adversity or event that would be considered a stressor to most people and that may hinder" developmental outcomes such as educational outcomes (Betancourt & Khan, 2008, p. 318). An academic risk factor, specifically, is a

[3]Luthar, Cicchetti, & Becker (2000) argue for using the term "vulnerability" factor instead of "risk" factor, but I have chosen to use the term "risk" factor because my literature review showed it is still the most commonly used term.

variable that may have a negative causal relationship with a student's ability to have desirable educational outcomes (Siu, 1996). Examples could include limited English proficiency or learning disabilities because those factors can be said to actually cause difficulties by giving the student a disadvantage. In the case of my study, the main risk factor believed to cause undesirable outcomes was LFS, but I also investigated other risk factors reported to be associated with LFS including traumatic experiences, separations from caretakers, social distance, non-educationally oriented peers, a lack of authoritative adult supervision, and the number of hours a student spent working at employment each week.

Academic resilience research typically focuses on identifying the causes of academic resilience in individuals or groups that have risk factors (Luthar, Cicchetti, & Becker, 2000). Early academic resilience research focused on personal protective traits, such as self-efficacy, intelligence, and autonomy, believing they were responsible for the exceptional outcomes of academically resilient students (Luthar, Cicchetti, & Becker, 2000) and referred to those positive factors as "protective factors" (Alva & Padilla, 1995; Hunt, Morland, Barocas, Huckans, & Caal, 2002; Betancourt & Khan, 2008; Luthar, Cicchetti, & Becker, 2000). Recent academic resilience research, however, now generally describes resilience as a process, not a personal trait (Luthar, Cicchetti, & Becker, 2000; Gordon Rouse, 2001; Waxman, Rivera, & Powers, 2012). Current research attempts to understand how individuals' protective factors interact with protective factors in their environment to help them overcome the risk factors and have better outcomes. In other words, academic resilience researchers no longer believe that a person is born resilient, but instead,

becomes resilient through experiences and influences. Certain protective factors may start the resilience process and then lead to success that reinforces those factors. An example of this is a person who perseveres because he/she has confidence, and then experiences success, which makes him/her even more confident. This sort of interaction can be described as a "protective process" (Luthar, Cicchetti, & Becker, 2000). Thus, in this study I analyze the importance of protective factors in school environments in facilitating resilience among SLIFE.

Prominent resilience researcher, Gordon Rouse (2001) argues that psychological processes are important for understanding the resilience experience of at-risk individuals. Gordon Rouse used Ford's (1992) Motivational Systems Theory as a framework for explaining the protective processes of academically successful at-risk adolescents (Gordon Rouse & Cashin, 2000; Gordon Rouse, 2001). According to Motivational Systems Theory, motivation depends largely on personal agency beliefs Gordon Rouse referred to as academic self-concept (Ford, 1992). Gordon Rouse's (2001) research with at-risk adolescents found that academically resilient students had stronger academic self-concepts. Their stronger academic self-concepts consisted of stronger academic goals, stronger beliefs in their own abilities to achieve those goals, stronger beliefs they were supported in achieving those goals or at least not obstructed, and stronger beliefs that those academic goals were personally worthwhile (Gordon Rouse, 2001; Gordon Rouse & Cashin, 2000).

Other researchers have come to similar conclusions with regard to the roles of academic self-concept in the process of academic resilience in at-risk students (Waxman, Huang, & Padron, 1997; Waxman & Huang, 1996). To become resilient,

students must first have positive academic goals. Whether or not a student has positive academic goals can depend largely on peer, family, and community influences (Gordon & Song, 1994; Bankston & Zhou, 1997), but supportive adult role models nearly always play a strong role in instilling and/or fostering positive academic goals (Werner & Smith, 2001). Students who feel supported and cared for are more confident and motivated to make the necessary efforts to pursue their goals (Wentzel, 1997; Valenzuela, 1999; Alva & Padilla, 1995). When that perseverance is rewarded, students' self-concept is positively enhanced, leading to more perseverance and success (Garza, Reyes, & Trueba, 2004).

Sadly, this process can also often go in reverse. Research shows that immigrant students often arrive with lofty goals due to their belief that education is a valuable means by which they can improve their lives (Gibson, 1997). However, as these students encounter failure, discrimination, segregation, and denied opportunities for advancement or participation in school, they often begin to believe that educational success is unlikely and that the rest of their lives in the U.S. will also be unfair regardless of whether or not they complete their education (Sue & Okazaki, 1990; Alva, 1993; Alva & Padilla, 1995; Gibson, 1997). This feeling of hopelessness causes them to abandon their goals and efforts. Therefore, this model of an academic resilience process may also be a model of a vulnerability process that explains why many secondary school ELs are on downward academic trajectories after arrival (Suarez-Orozco et al., 2010; Suarez-Orozco & Suarez-Orozco, 2001).

My research examined high school ELs' resilience in overcoming the challenge of LFS by integrating resilience and academic self-concept theories. In

particular, my study focused on the role school-related variables played as protective factors influencing educational outcomes. The school-related variables included in this study were sheltered ESOL classes, as well as the students' perceptions of their teachers' level of caring and the level of social integration at their schools. My research with this model may help us appreciate the resilience of many SLIFE who overcome great challenges and also help us understand how schools can enable or disable their resilience. To better understand the influence of school-related protective factors, I have also studied the potential influence of other risk factors that may harm SLIFE, including traumatic experiences, separations from caretakers, perceptions of social distance, a lack of authoritative parenting, and hours spent working at employment.

1.2.3. Research Design.

This study was conducted in a mid-sized suburban public school district on the East Coast in the 2011-12 school year and focused on high school students classified as ELs concentrated in ten schools. It included 199 of the district's 300 high school ELs. Particularly important for this study were those students who had arrived as SLIFE. I implemented a quantitative research approach to address the main research questions by analyzing data from two sources. The first source was existing school system data. For this, I obtained permission from the Rainbow County school district to access data for participating students. Those data included information related to the students' previous formal schooling, including transcripts from their previous schools and records from an "intake" interview with the students and their parents about their home language and previous schooling when they first enrolled in Rainbow County. I also obtained information about the ESOL classes

each student took, as well as their demographic information. The second source was student survey data. For this, I implemented a survey with the participating students to measure their school-related protective factors, personal risk factors, and academic self-concept. By the end of the year, I had access to students' 2011-2012 school year educational outcomes including scores on tests of English language proficiency, and state-mandated standardized tests of algebra, biology, and English language arts referred to as High School Assessments (HSA). Data were merged into one database with identifiable matching case numbers for each participating student.

To analyze the data and address the research questions guiding this study, I used quantitative methods, including bivariate and multiple regression analysis (Tabachnick & Fidell, 1996; Allison, 1999) to estimate the strength and significance of arriving with LFS in predicting high school ELs' educational outcomes, namely their English language acquisition and performance HSAs. Before implementing regression analyses, I conducted preliminary analyses to determine whether the data met the assumptions of multiple regression analysis (Tabachnick & Fidell, 1996; Allison, 1999). That included, but was not limited to, checking for expected and unexpected correlations between variables that might lead to false conclusions.

The analyses came in several stages. In the first stage, I ran descriptive analyses to estimate the prevalence of each of the indicators of LFS for students on arrival (schooling gaps, low L1 literacy, and beginner English) and of a composite measure comprised of all the LFS indicators. For the second stage, I divided the students into two subsamples: SLIFE and non-SLIFE. Using those subsamples, I ran descriptive analyses on the incidence of personal risk factors and school-related

protective factors. For the third stage, I used bivariate regression analyses to estimate the effect of each of the factors on each of the educational outcomes for both subsamples. For the fourth stage, I ran bivariate regression analyses for each of the LFS indicators and the composite measure to estimate the associations they had with each of the educational outcomes (English language acquisition, and HSA scores). In this stage, I also conducted multiple regression analyses (Allison, 1999) with the LFS indicators, and the other protective, risk, or control variables found to be significant during bivariate analyses. In the final step I used multiple regression including interaction effects (Jaccard, Turrisi, & Wan, 1990; Allison, 1999; Baron & Kenny, 1986; Sobel, 1986) to determine whether ELs' academic self-concepts were playing a mediating or moderating role in the relationship between the risk and protective factors and the educational outcomes.

1.2.4. The Significance of this Study.

This study has important theoretical, policy, and practical implications. Firstly, this study focused on a growing segment of the U.S. student population that has not been extensively studied (DeCapua, Smathers, & Tang, 2010; Tarone, Bigelow, & Hansen, 2009; Tarone, 2010; Zehr, 2009). Secondly, this research can be used to inform the immigration debate by showing a comprehensive picture of the actual educational outcomes of ELs, who are predominantly immigrants, in a U.S. school system that is neither underperforming nor under-resourced (Maryland State Department of Education, 2013). Therefore, this study can inform us as to how these students fare when they are not placed in failing schools and given inadequate services, as is often the case (Gandara, Rumberger, Maxwell-Jolly, & Callahan, 2003). Thirdly, this study, with its focus on their progress and resilience, can help

reverse the negative stereotype of immigrant children as underachievers and thereby help reduce the stigmatization of immigrant children (Contreras, 2010). Fourthly, by applying motivational theory to understand the resilience process, this study allows us an opportunity to learn more about the educational experiences of ELs from an interdisciplinary perspective. Knowing more about their experiences in our schools can inform educational programs and interventions for high school SLIFE (Waxman, Rivera, & Powers, 2012).

1.2.5. A Brief Explanation of the Terms in this Study.

English learner (EL[4]). EL is a term commonly used to refer to an English language learner. In the past, it has been used interchangeably with the term "limited English proficient" (LEP) (U.S. Department of Education, 2011), but many people prefer the term EL because it does not identify the students by what they are lacking or by what is "limited" but instead by what they are learning or gaining. Regardless, students are classified as EL because their English proficiency is "limited." According to the U.S. government, people can be considered to have limited English proficiency (LEP) if they are "unable to communicate effectively in English because their primary language is not English and they have not developed fluency in the English language" (U.S. Department of Health and Human Services, 2011). Interestingly, the federal government allows each state to choose its own tests, standards, and processes for determining which student has LEP[5] so a student classified as EL in one state may not be classified as EL in another (Abedi, 2008;

[4] Previous the term English language learner (ELL) was used but this has recently been shortened to English learner (EL).
[5] See http://www.p12.nysed.gov/biling/bilinged/pub/LEPproc.pdf for New York State's process for identifying ELs as an example.

Covington, 2008; Linquanti & Cook, 2013). Under the educational law, commonly referred to as No Child Left Behind, the criteria, however, is that EL students' English proficiency be limited to the extent to which it interferes with their ability to demonstrate their knowledge on the state-mandated tests of achievement used for accountability purposes (U.S. Congress, 2002).

Limited formal schooling (LFS). For this study I have built on previous definitions and have defined LFS as a level of previous formal schooling that is significantly less in both quality and quantity than what students would ideally receive if they had grown up in the U.S. and attended U.S. schools (Freeman, Freeman, & Mercuri, 2002). This deficiency could be due to periods of non-attendance or having attended schools that did not adequately prepare them for grade-level performance in U.S. public schools. Researchers and policy makers describe ELs with LFS backgrounds as having fewer years of schooling, functioning at least two years below grade level in reading and mathematics, and having low first language academic literacy (New York State Department of Education, 2011; Mace-Matluck, Alexander-Kasparik, & Queen, 1998). These students are also more likely to have lower English proficiency on arrival because they have not studied it much before, unlike many well-schooled ELs (DeCapua, Smathers, & Tang, 2007).

Based on these descriptions, I argue that LFS is not really one factor but actually a conglomerate of several factors. Those factors are low academic background knowledge, low L1 literacy, limited English proficiency, and a history of interrupted, inadequate, or no schooling. I also argue, however, that the concept of LFS as it is commonly used in educational policy and research is problematic since it

confounds "formal schooling" (i.e. time spent in school) with "formal education" (i.e. knowledge or skills typically acquired in school). It is also problematic that some research and policy documents treat LFS as a dichotomous characteristic that students either have or do not have. I argue that it is more accurate to consider students as having more or less formal schooling measured on a continuum, and that previous formal schooling, or the lack of it, can be multidimensional.

This study operationalized LFS as it is described in the educational literature. Knowing that it was problematic I conducted analyses with that LFS variable and also separate analyses for the individual indicators or components of LFS.

Student with limited or interrupted formal education (SLIFE). In educational literature and policy documents, ELs with LFS have been identified by myriad terms. The most popular term at the moment, and the term used for my study, is "SLIFE," an acronym that stands for "student with limited or interrupted formal education" (DeCapua, Smathers, & Tang, 2010; DeCapua & Marshall, 2010). This term is a derivation of the term used by the New York State Department of Education, "SIFE," which stands for "student with interrupted formal education" (New York State Department of Education, 2011). A difference, however, is that the term SIFE is more restrictive since the New York State Department of Education is very clear that students must have "had at least two years less schooling" to be considered SIFE. I, like other researchers, maintain that evidence for missing years of schooling should not be an indispensable requirement for identifying students as having LFS, as low education may result from inadequate schooling without gaps (Freeman, Freeman, & Mercuri, 2002), and newly-arrived students are not always honest with school

officials about their previous schooling attendance (Advocates for Children of New York, 2010).[6]

In what seems to be the earliest literature on SLIFE, researchers discussed students they referred to as "low-literacy ELs" (Hamayan, 1994), "unschooled" ELs (Morse, 1997), "underschooled" ELs (Crandall, Bernache, & Prager, 1998), or ELs with "limited formal education" (Chamot, 2000). It is not clear whether these terms refer to the same concept because researchers using the terms focused mainly on describing the students in qualitative research and had no need to operationalize the term for quantitative purposes. Only New York State has clear protocol for identifying SLIFE and disaggregates their data from those of other ELs.

English for speakers of other languages (ESOL) is a term used in the U.S. public schools to refer to assistance programs designed to help public school students classified as ELs acquire the English proficiency they need to meet state proficiency standards (Genzuk, 2011; Somerset County Public Schools, 2013). ESOL (also referred to as ESL) programs are English-only immersion programs not to be confused with bilingual education.

Sheltered ESOL classes are academic content classes designed for and exclusively offered to students classified as ELs, in which the ELs are segregated from non-ELs[7] and taught with ESOL teaching methods to make the content accessible to ELs and build their English proficiency (Genzuk, 2011; Somerset

[6] Information about previous formal schooling is collected during the "intake" process when a student first arrives in the U.S. and registers for a school. By a federally-outlined process, school officials administer a "Home Language Survey." Researchers have shed doubt on this survey's ability to collect accurate information from students and their parents (Abedi, 2008).

[7] In this dissertation, I frequently use the term "non-ELs." Non-ELs may include both native English speakers and students who were formerly classified as ELs but have met state proficiency standards and may be currently classified by the state as RELs, or reclassified English learners.

County Public Schools, 2013). Sheltered classes in Rainbow County high schools include English Literature & Composition (the equivalent of 9th grade English), U.S. History, American Government, and Health. These classes award the same credit as their mainstream high school versions so they must follow the same state and county curriculum and help students meet the same standards. As they are ESOL program courses, however, they must be taught by certified ESOL teachers. As they are also content-courses, the teachers are often also certified to teach the course's content.[8] Sometimes a certified ESOL teacher will team teach with a certified content area teacher so both of these requirements are fulfilled. The high school ESOL classes offered in Rainbow County are described on state documents as sheltered courses.

L1 is an acronym used to refer to a person's first language or home language, which for an EL, is a language other than English, although in this study it may also be an English-based creole that is different enough from Standard American English to lead to comprehension problems in school. In this study, the L1 was sometimes students' language of homeland schooling and/or literacy instead of their home language as some students were not schooled or literate in their home languages but were instead schooled in another language (see page 108 for more clarification).

High School Assessments (HSAs) were the state-mandated tests of academic achievement being used in all high schools in the state in which the study was conducted (see page 102). These tests were designed to determine whether students had meet state standards for academic achievement and were a graduation

[8] Teachers of certain courses such as Health or American Government are required by state law to be certified to teach that content.

requirement. Students took three of these tests all total: Algebra 1, Biology, and English Language Arts (10th grade English).

Academic self-concept, as opposed to global or general self-concept, is one's perception of oneself specifically in academic contexts (Marsh, Parker, & Smith, 1983; Shavelson, Hubner, & Stanton, 1976). It is an internal characteristic, but it is strongly influenced by external contexts such as groups and situations, especially evaluation by others (Diaz, 2003). Therefore, it is an internalization of one's external identity as a student or learner. A person with a strong academic self-concept has positive academic goals and believes in the value of education. A person with a strong academic self-concept also has strong academic self-efficacy, or the belief that he/she is capable of doing what needs to be done to achieve an academic goal such as passing a test or earning a high grade in a class (Gordon Rouse, 2001). Likewise, that person also has a strong academic locus of control, or belief that "the environment is facilitative" of his or her academic effort and outcomes (p. 468).

Pedagogical caring refers to the type of professional caring teachers show for students through the way they support and interact with them in their role as teachers (Hult, 1979; Wentzel, 1997; Noddings, 1992; Valenzuela, 1999). According to Hult, "caring" for teachers is not just an emotion, but also a set of observable professional behaviors, since "caring about" for a teacher implies "caring for" (1979, p. 238). Wentzel's (1997) research on pedagogical caring shows that for teachers "caring for" students involves observable practices of which students are keenly aware and to which they respond well. Students in Wentzel's study identified specific characteristics of caring teachers that included making a special effort, having clear

expectations for students' behaviors as learners and persons, treating all students equally, showing respect for students as individuals, trusting students, showing concern for students' personal welfare, listening attentively, checking work, and noticing accomplishments.

Positive social integration, in this study, refers to a situation in which different groups share the same physical space and social space, and develop positive and mutual respectful social interactions, such as healthy friendships. In the case of this study, those groups would be ELs and U.S. born native-speakers of English that typify "mainstream America." It is important to note that physical integration of ELs does not necessarily lead to social integration (Duff, 2001; Harklau, 1999), since a positively socially-integrated school climate would additionally require that non-ELs respect ELs for who they are, and not be prejudiced, cruel, hostile, or intolerant.

Social distance. Schumann (1976) and others (Portes & Bach, 1985) have used the term "social distance" to describe the relationship between immigrants and the dominant cultural group in their host country. Low social distance is evident when immigrants have plans that involve long-term interactions with the dominant group, a feeling of respect for the dominant group's culture, and a feeling that the dominant group respects them in return. High social distance is evident when immigrants feel they are only temporarily in the country and have no long-term plans that involve the dominant group in their host country. They also may not respect the local language and culture, or even worse, find natives to be rude, unfriendly, hostile, or prejudiced against them, their culture, or their language.

Although perceived social distance from mainstream Americans may be closely related to social integration at school, the two factors are different in that the first describes how the immigrant child's family or community relates to the dominant cultural group as a whole, while the second describes how the immigrant child as an individual relates to peers from the dominant cultural group at school. While the child's experiences with the dominant culture at school surely affect his/her perceptions of social distance in the greater context (Alva, 1993) and vice versa, the two factors may also vary independently. For example, it is possible that a child could have positive experiences with peers from the dominant group at school, but still perceive prejudice from teachers and a large social distance from mainstream America (Medvedeva, 2010).

Authoritative parenting is parenting characterized by love, reasoning, clear and consistent high expectations, and strong support in meeting those expectations (Dornbusch, Ritter, Leiderman, Roberts, & Fraliegh, 1987). It is contrasted with authoritarian, permissive, or neglectful parenting in that it provides strong structure and support while respecting and fostering the child's ability to reason and make positive decisions independently of parents.

1.2.6. Conclusions.

In this section, I have introduced my study as a quantitative study of students classified as ELs in a well-resourced east coast suburban school system with a diverse population. I have explained that the purpose of my study was to understand how factors associated with LFS affected the educational outcomes of high school ELs. This study examined the role of academic self-concept in mediating or moderating risk and protective factors in ELs to foster resilience. Protective factors examined in

this study focused on school-related factors, namely pedagogical caring, ESOL classes, social integration, extra-curricular activities, and out-of-school help. Personal risk factors examined in this study included traumatic experiences, separations from caretakers, social distance, negative peers, a lack of authoritative parental supervision, and hours spent working in employment. I hope this study will give readers insight into the role schools play in influencing the educational outcomes of ELs in general and SLIFE specifically.

Chapter 2: Literature Review.

2.1. Introduction.

The purpose of this literature review is to summarize the existing research on the educational outcomes of SLIFE. Because of the scarcity of research on SLIFE, I draw on research on language minorities, ELs, refugees, labor migrants, immigrants, Hispanic-Americans, and Asian-Americans. This review is based on a much larger, more comprehensive literature review that covered hundreds of documents and identified many more factors that may be affecting SLIFE than what is presented here. However, in the interest of space and focus, instead of presenting all those findings, I present only those that are the most relevant to my theoretical framework for explaining resilience in SLIFE. I use Motivational Systems Theory (Ford, 1992) as the primary organizing framework for this literature review because it is considered to be one of the most comprehensive theories of motivation, or personal agency, in explaining resilience in the educational outcomes of at-risk students (Gordon Rouse, 2001).[9] Motivational Systems Theory integrates research and theory on students' environmental factors--namely their perceptions of their school experiences--with students' internal factors--namely academic self-concept, which is comprised of academic goals, beliefs about the personal value of education, academic self-efficacy, and academic locus of control (Gordon Rouse, 2001; Gordon Rouse &

[9] Besides the work of Gordon Rouse, who directly cites Motivational Systems Theory, much of the resilience research offers explanations of strong personal agency (i.e. tenacity, autonomy, perseverance, invulnerability) that are very compatible with Motivational Systems Theory (Waxman, Rivera, & Powers, 2012; Perez, Espinoza, Ramos, Coronado, & Cortes, 2009; Garza, Reyes, & Trueba, 2004; Rumbaut, 2000; Werner & Smith, 2001; Luthar, Cicchetti, & Becker, 2000; Alva & Padilla, 1995; Wang & Gordon, 1994).

Cashin, 2000; Ford, 1992). By using Motivational Systems Theory as my main theoretical framework, with its focus on personal agency, I go beyond simply identifying factors that generally predict success or failure, and instead, develop an explanation of why some students tenaciously persevere through hardships that would defeat other students. In applying this theoretical framework, I hope to contribute to our understanding of the process by which SLIFE become resilient.

This review begins by describing how LEP affects the educational outcomes of ELs, then describes how LFS additionally affects those outcomes, and finally, analyzes protective and risk factors for resilience. In its examination of risk and protective factors, this literature review briefly discusses some of the important factors that are beyond the immediate control of school staff and educational policy makers, but mainly focuses on those that are within the sphere of influence of school staff and policy-makers, to ensure that this dissertation has practical and policy applications. Furthermore, in the discussion of protective and risk factors and their effects, I frequently refer to their interactions with issues of academic self-concept, as these interactions are assumed to be central to the process of resilience in educational outcomes in Motivational Systems Theory (Gordon Rouse, 2001). Finally, this chapter ends with the conceptual model for explaining the educational outcomes of SLIFE that guides my research and presents the research questions addressed in this study.

2.2. Students with Limited or Interrupted Formal Education (SLIFE).

2.2.1. Limited English Proficiency (LEP).

Not all the students in this study had LFS, but all were classified as ELs by the state in which they lived based on a state mandated test of English proficiency called the LAS Links, and therefore, had limited English proficiency (LEP). Without English proficiency, it is difficult for students to learn what they are supposed to be learning or demonstrate their knowledge on tests and assignments in English (Burt, Peyton, & Adam, 2003; Heubert & Hauser, 1999; Abedi, 2008). In fact, some researchers have even stated that LEP may be the most influential variable in determining educational outcomes for children of immigrant parents in English-only schooling (Glick & Hohmann-Marriott, 2007; Gunderson, 2000). Lacking the required English proficiency in English-only schools often leads to disappointing outcomes for ELs, which in turn can cause them to slip into hopelessness and settle for lower educational and career aspirations (Gandara & Contreras, 2009) and slide into downward academic trajectories (Suarez-Orozco et al., 2010). Thus, if a school does not offer bilingual instruction, having LEP puts ELs at risk for academic failure (Garrison-Fletcher, et al., 2008; Gandara, Rumberger, Maxwell-Jolly, & Callahan, 2003).

The detrimental effects of LEP on a student's academics are serious, because the acquisition of English can take a long time. Even when provided with special English classes (i.e. ESOL classes), ELs generally take many years to acquire the English proficiency they need to be successful in school. Some studies estimate the time at three years on average (Conger, 2009), while others estimate it to be as high

as five to seven years (Cummins, 1981; Thomas & Collier, 2002; Hakuta, Butler, & Witt, 2000; Collier, 1987).

Research shows that, until they have acquired enough English proficiency, ELs' educational outcomes are generally adversely affected. For example, while immigrant students tend to have higher GPAs than native-born peers of similar race/ethnicity and socio-economic status (Kao, 1995; Kao & Tienda, 1995; Fuligni, 1997; Rumbaut, 2000; Dinh, Weinstein, Kim, & Ho, 2008; Garcia Coll & Marks, 2009), immigrant students with lower English proficiency generally have lower grades than immigrant students with higher English proficiency (Rumbaut, 2000; Suarez-Orozco et al., 2010; Crosnoe & Turley, 2011). Yet, despite the disadvantages associated with low English proficiency, ELs from certain immigrant communities tend to maintain unusually high grades largely on account of the strengths of their immigrant communities and families, such as their strong beliefs in the value of education, higher rates of homework completion, greater time spent studying, and better attendance (Bang, Suarez-Orozco, Pakes, & O'Connor, 2009; Gibson, 1988; Park, 2001).

Even when they have very high GPAs, however, ELs tend to perform below average on standardized tests of academic content (Gibson, 1988; Park, 2001; Flores, Batalova, & Fix, 2012; Abedi, 2008; Uro & Barrio, 2013; Office of English Language Learners, New York City Department of Education, 2009; Batalova, Fix, & Murray, 2007; Crane, Barrat, & Huang, 2011), even after controlling for other variables that may explain lower outcomes such as race/ethnicity or socio-economic status (Kao & Tienda, 1995; Zhang, 2003; Stiefel, Schwartz, & Conger, 2010). This is true for both

reading (White & Glick, 2009; Rumbaut, 2000) and math (Kao, 1995; Glick & Hohmann-Marriott, 2007; Conger, 2009). Yet, in spite of their lower standardized test scores, ELs make greater gains than non-ELs in scores on standardized tests over time and have similar test scores to non-ELs when they eventually become proficient in English (Batalova, Fix, & Murray, 2007; Office of English Language Learners, New York City Department of Education, 2009; White & Glick, 2009; Stiefel, Schwartz, & Conger, 2010; Uro & Barrio, 2013).

Researchers also generally agree that LEP is a significant predictor of dropout (Rumbaut, 2000; Ortiz-Licon, 2009; DebBurman, 2005), but not all researchers agree that ELs have higher overall dropout rates than members of other groups with similar demographics. One study using U.S. Census Data and a "status rate"[10] method of estimation showed foreign-born youth with LEP dropping out of school at a rate of 18% whereas the overall U.S. dropout rate for children of native-born parents was below 14% (Ruiz-de-Velasco & Fix, 2000). But a different study using an "event rate"[11] estimation method showed ELs had a dropout rate similar to or lower than the non-ELs in the study (White & Glick, 2009). More importantly, studies using the event rate estimation method have shown that the EL dropout rate seems to depend largely on the type of support the ELs receive. Programs that provide appropriate support such as bilingual education and/or well-designed ESOL programs have very low dropout rates for ELs (Fast Buffalo Horse, 2007; Bartlett, 2007; Short, Boyson,

[10] When using a status rate estimation method, researchers base their estimation of "dropout" on all people ages 16 to 24 who have attended a U.S. school at some time, do not have high school diplomas, and are not currently attending schools (National Center for Educational Statistics, 2002).
[11] In the event rate method of estimation, researchers use data from a sample and calculate the rate based on the percentage of participants who officially withdraw from school with the stated intention of not continuing their schooling elsewhere in the immediate future (i.e. not transferring).

& Coltrane, 2003; Tellez & Walker de Felix, 1993), while school systems that offer few services and tend to push kids out after age 18 have shockingly high dropout rates (Watt & Roessingh, 2001; Derwing, Decorby, Ichikawa, & Jamieson, 1999). Thus, the evidence of LEP as a predictor of dropout is inconclusive at best and school support may be a much more significant factor, thus lending credibility to Motivational Systems Theory with its focus on interactions between school-related factors and students' perceptions and beliefs (Gordon Rouse, 2001; Ford, 1992).

In conclusion, studies show that educational outcomes for ELs seem to depend on the degree to which their English proficiency is actually "limited." In other words, ELs with lower English proficiency face a greater challenge than those with higher English proficiency. Unfortunately, the disadvantage of LEP may linger for many years since it takes a long time to acquire academic English. Nevertheless, the outcomes of ELs are remarkably variable and depend largely on contextual factors such as the influences of their community and the support they are given at school. Moreover, ELs seem to make remarkable gains on the average and generally perform as well as non-ELs by the time they have acquired the necessary English proficiency. Given that the research suggests ELs are often resilient to the academic disadvantages caused by having LEP in English-only schools, it is a worthy task to understand how this resilience occurs and facilitate it better.

2.2.2. Limited Formal Schooling (LFS).

LFS in this study was defined as having low academic background knowledge and first language literacy as a result of having interrupted, inadequate, or no formal schooling. Although all students in this study were classified by their state as ELs,

their previous formal schooling backgrounds varied a great deal. Some students arrived with formal schooling backgrounds that prepared them very well for U.S. schools, while others arrived with much less experience in formal schooling.

LFS and educational outcomes. This literature review shows that LFS is a major additional academic disadvantage for ELs (Thomas & Collier, 2002; Greenberg, Macias, Rhodes, & Tse, 2005; Office of English Language Learners, New York City Department of Education, 2009; Suarez-Orozco, et al., 2010; Ruiz-de-Velasco & Fix, 2000). The following section of this literature review will show that, even after many years of schooling in the U.S., SLIFE generally have lower English proficiency, scores on standardized tests, grades, and rates of graduation than other ELs.

Firstly, researchers have claimed that LFS causes ELs to take longer to become proficient in English (Thomas & Collier, 2002). In fact, a national study of adult immigrants in the U.S. concluded that formal schooling before arrival was a major determiner of English attainment in the U.S. (Greenberg, Macias, Rhodes, & Tse, 2005). This is particularly true for the acquisition of English reading skills. Thomas and Collier (2002) concluded that LFS has a negative effect on standardized tests of English reading. In fact, they concluded that the influence of LFS on students' English reading skills is even stronger than the impact of their age at arrival in the U.S. Thomas and Collier (2002) found that ELs arriving with no formal schooling were the least likely to develop full proficiency in English reading even after many years. This may be why even resilient SLIFE who have managed to earn high grades in high school and eventually enroll in college may continue to have

lingering problems with academic English that hamper their long term educational and career goals (Bartlett, 2007; Bigelow, 2007).

Given that SLIFE take longer to develop English proficiency and reading skills than ELs without LFS, their lower scores on standardized tests of academic content are not surprising (Office of English Language Learners, New York City Department of Education, 2009). Likewise, it is easy to understand how having more difficulty with English and standardized tests would lead to lower grades for SLIFE (Suarez-Orozco, et al., 2010). Yet, there is ample evidence from qualitative studies that SLIFE sometimes earn high grades in high school even while they still have many of the initial disadvantages with which they arrived (Walsh, 1999; Bartlett, 2007; Bigelow, 2007). However, like with other ELs, the high grades may be largely due to effort, instead of skills (Bang, Suarez-Orozco, Pakes, & O'Connor, 2009).

Since SLIFE tend to have lower standardized test scores and grades, it is reasonable to assume they also have lower graduation rates. Studies using Census data show higher dropout rates for recent-arrival adolescent ELs who are from countries such as Honduras or Guatemala that provide less public education (Ruiz-de-Velasco & Fix, 2000; Fry, 2005). However, studies from programs in which the SLIFE were academically supported in their U.S. schooling show very low dropout rates for SLIFE (Short, Boyson, & Coltrane, 2003). In fact, one study from a school with a bilingual program reported that the dropout rate for recent-arrival Hispanic adolescents with LFS was lower than that of Hispanics raised in the U.S. (Tellez & Walker de Felix, 1993). Other studies have also reported programs in which the dropout rates for SLIFE were very low because special supports were in place

(Bartlett, 2007; Short, Boyson, & Coltrane, 2003).[12] Thus, we may conclude that LFS leads to lower graduation rates, but that the effect can be greatly reduced or even eliminated by providing appropriate support.

In conclusion, studies generally show that LFS is associated with lower educational outcomes for English proficiency, scores on standardized tests, grades, and rates of graduation. What these studies do not explain, however, is exactly why this may be true. For example, we do not know whether SLIFE have less English proficiency many years after arrival because they have learned English more slowly or because they arrived with less English proficiency to begin with and had a larger gap to close. Similarly, we must ask whether SLIFE still have lower math scores many years after arrival because they started with a greater disadvantage or because they learn more slowly. Might the lower dropout rates for SLIFE in programs that provide adequate services be due to the fact that they provide their students with the academic support they need to close the gap so they can graduate? Moreover, how does receiving or not receiving adequate academic support affect components of academic self-concept such as academic self-efficacy and locus of control? And, how might those effects be influencing students' effort and corresponding outcomes? Taking these questions into account is important to better understand the educational outcomes of SLIFE.

Understanding the dimensions of LFS. In order to understand why SLIFE tend to have lower educational outcomes, it is important to take into account the complexity of LFS as a construct. LFS can be conceptualized as a collection of

[12] Examples of such programs are Luperon High School and International High School in NYC. These programs are not exclusively for SLIFE and have special entrance criteria, so it is not possible to use such programs to estimate typical SLIFE dropout rates nationwide.

variables instead of as one variable. The key components of LFS as it is described in literature are low L1 literacy, LEP, low academic background knowledge (e.g. knowledge about math or science), and a history of interrupted, inadequate, or no previous formal schooling on arrival (Mace-Matluck, Alexander-Kasparik, & Queen, 1998; Ruiz-de-Velasco & Fix, 2000). Interrupted education is defined by the state in which the study takes place as six or more consecutive months of school non-attendance (not including vacations) (Somerset County Public Schools, 2013), while in New York it is defined as two years or more (New York State Department of Education, 2011). Inadequate formal schooling in this study, however, refers to schooling that may be consistent but does not prepare a student for grade-level instruction because it lacks the necessary resources; namely, qualified teachers, instructional time, and supplies such as books. In many countries, school is frequently closed, is open for only a few hours a day, and/or lacks teachers, chalkboards, desks, and books (Flaitz, 2006; Hillman & Jenkner, 2004).

These components of LFS, however, may not be perfectly correlated or entirely connected and may have individualized effects on educational outcomes. For example, one study that examined years of schooling and first language literacy as separate constructs found the two were not significantly associated (Tarone, 2010). Other studies have even found that people pass literacy from generation to generation without formal schooling in some cultures outside of the U.S. (Scribner & Cole, 1978), and that people in some countries are sometimes schooled without literacy (Robson, 1983). Furthermore, while LFS is generally associated with low English proficiency, we know that years in school in some countries do not always result in

English proficiency if those countries have adequate public education but very little English instruction (Flaitz, 2006). Furthermore, some adolescents may have exposure to English from using it for various out-of-school purposes in their homelands but may have never attended school. Finally, while LFS is generally associated with low math or science knowledge, we know that some students can learn a great deal of academic content outside of school settings (Lave & Wenger, 1991), and others may arrive many years below grade level in content areas despite having academic transcripts that show no interruptions in their formal schooling (DeCapua, Smathers, & Tang, 2007). Thus, the different dimensions of LFS discussed above may not always correlate well because the construct of LFS confounds learning with schooling. Because these components are very different and not completely related, it may be necessary to examine the effects of the individual components of LFS separately in order to better understand the educational outcomes of SLIFE.

Schooling gaps. In the U.S., newly-arrived immigrant students are placed in a grade appropriate to their age, regardless of their previous formal schooling, up until 9th grade, at which point grade placement is based on credit completion.[13] For this reason, it is normal for immigrant students who did not complete 8th grade in their homeland to be placed in 9th grade in the U.S. on account of their age. This situation is what one might refer to as a schooling gap, or missing years of schooling relative to grade. New York State considers schooling gaps, or missing years of schooling relative to grade, to be the primary criteria for identifying ELs with LFS (New York State Department of Education, 2011).

[13] See http://iusd.org/enrollment/documents/GradeLevelPlacementforParents2012-13.pdf for a document from California outlining this policy. This policy is mandated by Title VI of the Civil Rights Act of 1964 and Executive Order 13166 (U.S. Department of Justice, 2014).

Schooling experience relative to grade placement is one dimension of LFS that may have important effects, since exposure to schooling through time spent in school appears to effect people in many ways. One of the effects attributed to time spent in school, for instance, is the development of cognitive abilities that facilitate future in-school learning (Bigelow & Schwarz, 2010). Formal school learning, for example, teaches learners to be able to learn independent of meaning and context (Tarone, Swierzbin, & Bigelow, 2006; Castro-Caldas, 2004), so learners can learn from books or classroom instruction instead of relying on direct experience.[14] Unschooled individuals, on the contrary, have difficulty with in-school learning unless they can attach concrete meaning and experience to what they are learning. This disadvantage affects all types of learning, ranging from work with grammar (Tarone, Swierzbin, & Bigelow, 2006) to numbers (Castro-Caldas, 2004). People who have spent time in school are also better able to categorize objects (Brucki & Rocha, 2004) and recall sentences word for word after a time delay (Ostrosky-Solis, Ramirez, Lozano, Picasso, & Velez, 2004). This does not mean schooled individuals are cognitively superior to unschooled individuals, but simply that being schooled facilitates future school learning because schooling-type tasks are easier for people having more experience with those tasks (Bigelow & Schwarz, 2010). So, if an unschooled person wants to succeed in formal schooling, she/he may first have to develop the cognitive functions needed for formal schooling before fully benefiting

[14] Examples given by these authors of learning independent from meaning and context include recalling or repeating pseudo-words, identifying objects in drawings or pictures, and copying drawings that are purely abstract and non-representative. In these studies, the unschooled individuals had a stronger need to attach meaning to the meaningless word or picture they were tasked with learning or repeating. All of these studies admit that it is hard to differentiate the cognitive effect of early childhood schooling from that of early childhood literacy. I will discuss this issue more later.

from the formal schooling experience. In other words, unschooled people may need to learn "how to 'do' school" (Lave & Wenger, 1991, p. 107).

Another way previous formal schooling facilitates future schooling is by preparing learners for the culture of schooling. This is necessary because, within any culture, formal schooling is a subculture in itself (Ostrosky-Solis, Ramirez, Lozano, Picasso, & Velez, 2004). It has its own norms and values separate from those of the larger culture. For example, in schooling, knowledge is often packaged in materials, such as books, that can be owned, bought, or sold. Knowledge in schooling also usually comes from, and is controlled by, a single authority figure, the teacher. The instruction in schooling is generally decontextualized (i.e. removed from its real-world practical application and placed in a classroom or book) and relies on abstract concepts, such as theories, principles, formulas, and rules, instead of direct experiences. And, in schooling, learning is measured through standardized tests and grades that further commodify learning. In these ways, formal schooling may be alienating to students from cultures with less formal schooling (Lave & Wenger, 1991) and cause an experience similar to the "culture shock" a person experiences when trying to live within a new culture that has different values or beliefs (DeCapua & Marshall, 2010).

Unschooled individuals do not lack learning experiences, however; it's simply that unschooled individuals are accustomed to learning experiences that have different norms than those of schooling. For example, in out-of-school learning, information often freely circulates among peers, instead of coming from a single authority figure such as a teacher (Lave & Wenger, 1991), or, when an authority

figure is involved, the relationship is more of a mentor or model than of a lecturer (Lado, 1990). Thus, out-of-school learning values relationships and membership in a group over books and test scores. Out-of-school learning also involves "very little observable teaching" (Lave & Wenger, 1991, p. 92) and is generally much more contextualized and pragmatic (DeCapua & Marshall, 2010), with language used for real world problem solving, not for discussing abstract ideas (Lado, 1990). So, for instance, in out-of-school learning, when people discuss the difference between a donkey and a mule, they probably have the two specimens directly in front of them at that moment.

These differences in cognition and culture between schooled and unschooled individuals may help explain the lower educational outcomes for ELs that have missed some schooling before coming to the U.S. Thomas and Collier (2002; 1997), for example, found that the number of school years an EL had missed before arriving in the U.S. was significantly associated with lower English reading scores many years later in the U.S.

L1 literacy experience is another component of LFS. Many studies suggest that literacy may be the main benefit of schooling and the primary cause of better educational outcomes for schooled ELs in U.S. schools (Kurvers, Stockmann, & van de Craats, 2010; Garrison-Fletcher, et al., 2008; Castro-Caldas, 2004; Thomas & Collier, 2002; Dufva & Voeten, 1999; Robson, 1983). Experiments involving magnetic resonance imaging and other similar technology show that learning to read causes fundamental changes in the organization and functioning of brain (Castro-Caldas & Reis, 2003), suggesting that many of the cognitive benefits of schooling

may be explained by the development of literacy skills. The same imaging technology shows that specific segments of the brain are less developed and slower to process certain types of information in people who did not become literate in childhood (Castro-Caldas, 2004). For example, non-literate people are slower to identify two-dimensional objects (Brucki & Rocha, 2004) and need more lifelike images (Reis, Peterson, Castro-Caldas, & Ingvar, 2001) with enhancing qualities such as color (Reis, Faisca, Ingvar, & Peterson, 2006) than literate people. Thus, the images on which schooling so much depends--such as pictures, symbols, maps, and diagrams--might be less effective for the instruction of less-literate individuals.

Previous literacy experience in a first language may also help explain the benefits of previous formal schooling on learning a second language such as English (Kurvers, Stockmann, & van de Craats, 2010; Garrison-Fletcher, et al., 2008; Thomas & Collier, 2002; Dufva & Voeten, 1999). In fact, studies that controlled for first language literacy while estimating the effect of previous years of schooling on current second language acquisition found no significant effect for previous years of schooling on second language acquisition (Kurvers, Stockmann, & van de Craats, 2010; Robson, 1983). Robson (1983), for instance, employed a quasi-experimental design to investigate the role of previous literacy separate from that of previous formal schooling. While working as an English as a second language teacher in a refugee camp for the Hmong hill tribe people in Thailand, Robson found some Hmong refugees that had both formal schooling and literacy, some that had neither, and some that had one without the other. Given this naturally existing control sample, Robson taught English using methods that did not depend on literacy and

tested their achievement in English without using literacy-based tests several months later. Robson found that students with formal schooling and no literacy did not learn English any faster than those who had no formal schooling and no literacy, but those with literacy learned English faster regardless of their formal schooling background.

Besides the Robson study, many other studies have concluded that students with less first language literacy make slower progress learning a second language than those with more (Kurvers, Stockmann, & van de Craats, 2010; Thomas & Collier, 2002; Dufva & Voeten, 1999; Garrison-Fletcher et al., 2008). These studies claim that first language literacy skills positively transfer to facilitate second language literacy learning (Garrison-Fletcher et al., 2008). For example, literate learners have concepts related to literacy that give them advantages, such as the idea that words on a page can signify meaning and letters can signify sound (Burt, Peyton, & Adam, 2003). Literate people are also more capable of explaining or describing something to a listener without the benefits of illustrative visual aids, such as when a person has to explain to play a game when the pieces and board for the game are not present (Scribner & Cole, 1978). Many studies have also found that literate people have more cognitive and neurological development for second language learning (Dufva & Voeten, 1999; Tarone, 2010; Bigelow, delMas, Hansen, & Tarone, 2006; Tarone, Swierzbin, & Bigelow, 2006). For example, literate learners who have experience with a phonological writing system can remember and repeat nonsense words better (Dufva & Voeten, 1999; Tarone, 2010) and are faster to notice grammar when listening and more able to repeat it back to the speaker when asked (Bigelow, delMas, Hansen, & Tarone, 2006; Tarone, Swierzbin, & Bigelow, 2006). Thus, previous

literacy experience, with or without formal schooling, gives ELs advantages for learning English, and their increased English language acquisition may lead to further advantages in other educational outcomes such as higher grades or standardized test scores.

Although some of the benefits of previous literacy experience for second language learning may be due to neurological differences associated with literacy development in early childhood (Castro-Caldas, 2004), some researchers have suggested that second language literacy learning could still be assisted for low L1 literate adolescent second language learners through the addition of first language literacy instruction to complement the second language literacy instruction (August & Shanahan, 2006; Thomas & Collier, 2002; Garrison-Fletcher, et al., 2008). In fact, in one study, researcher Michele Burtoff (1985) seems to confirm that notion. Burtoff taught English to a group of non-literate English learners, but selected one group to receive additional first language literacy instruction. The group receiving the extra first language literacy instruction made greater gains in English language literacy. Interestingly, the students receiving extra first language literacy instruction also showed improvements in indicators of confidence and motivation.

Academic content knowledge is yet another explanation for the benefits of formal schooling. ELs who have strong academic foundations from their homeland before immigrating generally have better academic outcomes after immigrating (Duff, 2001). It may be that academic content knowledge facilitates future academic content learning in much the same way that experience with schooling tasks helps with future schooling tasks that are similar. It may also be, however, that previous academic

achievement affects ELs' future academic achievement through self-efficacy (Fox, Kitsantas, & Flowers, 2008). Students who lack experience in math, science, or reading skills in their homeland before immigrating are likely to feel ashamed and doubt their ability to learn those subjects in the new country (Brown, Miller, & Mitchell, 2006). That perception on their part, regardless of the reality, would lead to their having weaker academic self-concepts, and in turn, less academic resilience (Gordon Rouse, 2001).

2.2.3. Conclusion.

LFS is an important risk factor that predicts lower educational outcomes for ELs who are already at risk due to LEP. It is likely that, on the average, ELs have lower educational outcomes than non-ELs, but SLIFE most likely have even lower educational outcomes. LFS appears to correspond with lower grades, English proficiency, scores on standardized tests of academic content, and graduation rates even many years after the ELs arrived in the U.S. Whether their gains in these areas are lower for SLIFE than those of other ELs is not clear, however. It may simply be that they started with larger gaps and require longer to bridge those gaps than other ELs.

Moreover, the academic outcomes for SLIFE may be quite variable. Part of this variability may be an artifact of conceptualizing LFS as a dichotomous class to which students either belong or don't belong. It may be more precise to operationalize LFS as a continuous variable, or quality students have more or less of, while keeping in mind that it is also multidimensional with components (gaps in the years of schooling, lower academic content knowledge, low previous literacy experience, and LEP) that may or may not be entirely related and that may have

different effects depending on the social context of U.S. schooling experiences. Some of the components may be more important than the others, and some of the components may help develop the others. Thus, it is beneficial to study the components separately.

However, much of the variability among SLIFE may be due to learner characteristics, such as academic self-concept, and how those characteristics interact with school-related variables such as specialized academic support for SLIFE. The next section of this literature review will elaborate on those factors and the role they play in the resiliency process.

2.3. Explaining SLIFE Educational Outcomes: School-Related Protective Factors, Personal Risk Factors and the Mediating Role of Academic Self-Concept in the Resiliency Process.

In order to complete grade-level academic coursework in English and meet graduation standards before they "age out" of high school,[15] SLIFE have to learn at a rate far faster than other students to make up for their inadequate academic preparation. They may or may not receive help to achieve this goal, but in either case, they will need to be persistent. Educational research attempts to understand such persistence through the concept of resilience. Currently, educational resilience researchers view resilience, not as a stable personal trait, but as a process in which personal factors interact with environmental factors leading to educational outcomes or trajectories that are better than what is typical for a student facing similar

[15] In the state in which this study takes place, students are not allowed to start another year of schooling if they are over the age of twenty. This is common in the U.S. although there are some exceptions. When students reach this age limit and are no longer allowed to continue, we refer to it as "aging out."

challenges (Luthar, Cicchetti, & Becker, 2000). In this section I explain how school-related protective factors and personal risk factors influence the educational outcomes of SLIFE while also influencing their academic self-concepts, which in turn mediate or moderate the influences of their risk and protective factors on those educational outcomes.

2.3.1. School-Related Protective Factors.

This literature review finds that school-related protective factors have important implications for the educational outcomes of SLIFE, especially the professional caring of teachers and school staff, the availability and quality of academic support programs, and ELs' opportunities for social integration with high-achieving English speakers. I do not deny the possible importance of other school-related protective factors such as bilingual education, but this literature review does not discuss them since they are either not factors in the context of the present study or are somehow beyond its scope.

Perceived pedagogical caring from school staff. Close and caring relationships with supportive adults are absolutely essential for resilience in at-risk youth (Luthar, Cicchetti, & Becker, 2000; Werner & Smith, 2001). Case studies show this is especially true for SLIFE (Lucas, 1997), Mexican-Americans (Valenzuela, 1999), and the children of labor migrants (Garza, Reyes, & Trueba, 2004). The term "pedagogical caring" does not refer to a teacher's emotions, however, but instead refers to observable pedagogical practices that students interpret as caring (Hult, 1979; Wentzel, 1997; Noddings, 1992; Valenzuela, 1999). Pedagogical caring includes teacher behaviors such as making a special effort to help

students learn, treating students fairly, showing interest in students' personal lives, and having clear, consistent, and high expectations for all students (Wentzel, 1997).

Students who perceive their teachers care about them tend to have better educational outcomes. ELs report that having teachers who take time to talk with them or tutor them gives them more access to information, more opportunities to learn, and very motivating feelings of self-worth (Wassell, Fernandez, & LaVan, 2010). Longitudinal research shows that increases in perceived pedagogical caring are generally followed by increases in studying, homework completion, and attendance (Wentzel, 1997). Studies show that pedagogical caring is also related to lower dropout rates for children of labor migrants (Gibson, 2003) and all students in general (Lee & Burkam, 2003).

Unfortunately, such caring is not always evident among teachers of immigrant students; in fact some teachers often have very negative attitudes about immigrant children (Suarez-Orozco & Suarez-Orozco, 2001). For instance, in one study, a principal being interviewed claimed that the biggest challenge facing his school was convincing the teachers that immigrant adolescents were "teachable" (Suarez-Orozco & Suarez-Orozco, 2001, p. 127). In another study, 25% of all ELs reported experiencing discrimination from teachers (Medvedeva, 2010).

And, just as perceived pedagogical caring can lead to better educational outcomes, perceptions of teacher prejudice, the reversal of perceived pedagogical caring, can lead to lower educational outcomes. This may be largely because experiences with discrimination from teachers give immigrant students the impression that school is not fair and that the rest of their lives in the U.S. will be

similar (Stone & Han, 2005). The impression that life is not fair often leads to feelings of helplessness that lower academic resilience (Alva & Padilla, 1995; Vargas-Reighley, 2005), since students who think that their environment is not supportive of their educational goals, or that education will not benefit them because of diminished opportunities in the outside world, are less academically resilient (Gordon Rouse, 2001). Furthermore, students who perceive that their teachers are prejudiced are more likely to "act out" or exhibit behaviors and attitudes that make them appear oppositional to educational authority (Valenzuela, 1999). These perceptions can lead to small conflicts with school staff that can escalate into bigger conflicts and result in those students being "pushed out" of school (Um, 2003; Gandara & Contreras, 2009).

In conclusion, perceived pedagogical caring may lead to resilience in SLIFE and all students. Specifically, it may affect whether students believe their school environment is supportive of their educational goals, which determines whether they believe they are in control of their educational outcomes and that education will benefit them later in life. Those beliefs are components of academic self-concept, and therefore, foster resilience (Gordon Rouse, 2001). Likewise, perceived teacher prejudice, the absence of pedagogical caring, seems to lead to feelings of helplessness, hopelessness, and disillusionment that make students more vulnerable to academic failure. Pedagogical caring may be particularly important for SLIFE because their situation demands more persistence.

Perceived positive social integration with non-ELs at school. Similar to perceived pedagogical caring, ELs' perceptions that their schools are positively

socially integrated are part of a healthy school climate for learning (Alva, 1993). The term, social integration, as it is used in this study, refers to a situation in which different groups, not only share the same physical space, but also share the same social space, specifically, friendship and other social interactions. In the case of this study, those groups would be ELs and U.S. born native-speakers of English that typify "mainstream America." However, research shows that physical integration of ELs does not necessarily lead to social integration (Duff, 2001; Harklau, 1999), since a socially-integrated school climate would additionally require that non-ELs respect ELs for who they are, and not be prejudiced, cruel, hostile, or intolerant. Admittedly, as the next few pages will show, the research on social integration offers mixed findings on educational outcomes; but nevertheless, there is enough evidence to warrant considering social integration as a protective factor, especially considering that the social domain of school life is believed to affect students' academic self-concepts (Gordon Rouse & Cashin, 2000), an important factor for at-risk students (Gordon Rouse, 2001).

One caveat to social integration is that the effects on educational outcomes seem to depend largely on the groups with whom the ELs are socially integrating. Portes and Zhou (1993), for instance, have suggested that social integration with native-speakers of English is not necessarily beneficial to children of immigrants if it means assimilating into a low-performing group. Given that some very socially segregated immigrant enclaves have values and behaviors that foster better outcomes for their members (Gibson, 1988), it may sometimes be better for students to stay within their enclave. This may be why Kao (1995) did not find the same benefits for

Asians as whites when studying the educational benefits of participation in extra-curricular activities, one important indicator of social integration. Furthermore, there is research on literacy acquisition with students with LFS and low-L1 literacy that concluded that frequent social use of the second or "target" language did not significantly correlate with faster second language literacy acquisition (Kurvers, Stockmann, & van de Craats, 2010). It may be that students can gain the social English they need from socializing with native-speaker peers without gaining academic English needed for better academic outcomes (Cummins, 1981).

Nevertheless, there is much research showing positive effects for perceived social integration on educational outcomes. There are many studies, for example, that conclude that social integration with native speakers leads to increased opportunities for English language acquisition (Saville-Troike, 1984; Derwing, Decorby, Ichikawa, & Jamieson, 1999; Fox, Kitsantas, & Flowers, 2008). One study using data from SAT takers, for example, shows that high-achieving Hispanics are more likely to frequently use English socially than low-achieving Hispanics (Gandara & Contreras, 2009).

One indicator of social integration, participation in extra-curricular activities, seems to be very beneficial for academic outcomes. Studies show that participation in extra-curricular activities predicts higher academic achievement in all 8th through 12th graders (Zaff, Moore, Papillo, & Williams, 2003). Reports from agencies that serve children of migrant workers show that the ones who drop out usually have low participation in extracurricular activities (Johnson, Levy, Morales, Morse, & Prokopp, 1986). Case studies that compared Hispanic high achievers to low achievers found

that one of the major differences between the two groups was their participation in extra-curricular activities (Gandara & Contreras, 2009). Perez et al. (2009) even concluded that participation in extracurricular activities was the most significant predictor of undocumented immigrants' educational outcomes.

The research on participation in extra-curricular activities suggests that it is so beneficial to immigrant students precisely because of the social-integration it involves (Gibson, Bejinez, Hidalgo, & Rolon, 2004). When students work with other students to cooperatively achieve goals during extra-curricular activities, they also support each other in other ways by sharing information and inspiration. Positive experiences, such as cooperating to achieve goals with other students, may increase a student's self-esteem and self-efficacy. Positive findings for participation in extracurricular activities are observed in studies with general students (Zaff, Moore, Papillo, & Williams, 2003), undocumented immigrants (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009), and children of migrant workers (Garza, Reyes, & Trueba, 2004).

Unfortunately, the counterpart of perceived positive social integration, perceived hostility, prejudice, or ambivalence from peers, is probably common for ELs. In one study, 33% of the ELs reported having experienced discrimination from peers (Medvedeva, 2010). It is not uncommon to find ELs reporting that they are constantly being teased by peers (Wassell, Fernandez, & LaVan, 2010) and mocked for their clothing and mannerisms, as well as their pronunciation and grammar when they use English (Duff, 2001). Such experiences lead to a feeling of isolation from their school environment that is associated with lower educational outcomes for

Asian-American adolescents (Alva, 1993) and migrant youth (Prewitt-Diaz, Trotter, & Rivera, 1990).

ESOL classes. English for Speakers of Other Languages (ESOL) programs are special programs designed to help students classified as EL gain the English proficiency they need to be academically successful and meet state English proficiency standards (Somerset County Public Schools, 2013). Although some researchers have identified major problems found in ESOL programs (Wassell, Fernandez, & LaVan, 2010; Valdes, 1998), much of the research is positive and suggests that effective offering ELs special ESOL classes leads to better educational outcomes for most ELs (Callahan, Wilkinson, & Muller, 2010; Callahan, Wilkinson, Muller, & Frisco, 2009; Harklau, 1999; Duff, 2001).

Among the concerns with ESOL is that segregating ELs into special ESOL classes may deprive them of learning opportunities found in mainstream classes. Valdes (1998), for example, has claimed that segregation in ESOL classes deprives ELs the opportunity to be placed together with native-speakers of English and hear English. Other research has shown that such ESOL classes sometimes provide lower quality instruction than non-ESOL classes. For example, Wassell, Fernandez, & LaVan (2010), after interviewing ELs about their ESOL classes, found that ELs often complained that some of their ESOL classes had dumbed-down or repetitious content and wasted time on undemanding activities such as watching movies. Some ELs in studies have described their ESOL classes as childish (Derwing, Decorby, Ichikawa, & Jamieson, 1999) and complained that they denied them opportunities to learn grade-level content in challenging mainstream or advanced classes (Gibson, 1988;

Gunderson, 2000; Valdes, 1998; Um, 2003). These claims are confirmed by researchers who, based on classroom observations, have described instruction in ESOL classes as slow, repetitious, and unchallenging (Garcia, 1999; Valdes, 2001; Duff, 2001).

Other studies, however, show that inclusion in mainstream classes does not necessarily provide ELs with a better learning environment than segregation in ESOL programs and that ESOL classes may provide many advantages for ELs, especially those with LFS. For example, in interviews with ELs, many stated that the ESOL teacher was the only teacher with whom they had a caring relationship (Wassell, Fernandez, & LaVan, 2010). This is serious because caring relationships with teachers lead to better educational outcomes (Wentzel, 1997) and resilience for at-risk adolescents (Werner & Smith, 2001). Some studies have also concluded that ELs are sometimes more likely to have opportunities to use English in ESOL classes than in mainstream classes. Duff (2001), for instance, reported that ELs were generally less reticent to use English in all-EL classrooms than in typical mainstream classes in which they often felt "marginalization, insecurity, and anxiety" (p. 119) due to experiences with prejudice such as teasing from mainstream peers about their pronunciation. After observing both ESOL classes and mainstream classes, Harklau (1999) concluded that ESOL lessons provided ELs with more comprehensible input and opportunities to interact; ask for clarification; and practice reading, writing, speaking, and listening with support and effective feedback. In contrast, mainstream classes generally focused on "lectures" that were often not comprehensible to ELs due to speed, lack of context, lack of background knowledge, and idiomatic language.

ELs in these classes did not speak or ask for clarification because they were too intimidated.

Claims that ESOL classes advantage ELs instead of disadvantage them are supported by analyses of data from large national studies. For example, an analysis of the 1988 National Educational Longitudinal Study data showed that recent-arrival ELs were not significantly less likely than other students to take challenging academic courses if placed in ESOL programs after controlling for previous course taking, previous grades, and other background factors (Callahan, Wilkinson, & Muller, 2010). In fact, a similar study, using the "Add Health[16]" data, found that ELs who were given adequate and appropriate ESOL services were actually more likely to take college preparatory courses, have higher GPAs, and experience fewer course failures than their mainstream peers (Callahan, Wilkinson, Muller, & Frisco, 2009). Another study using data from all ELs in Texas found that Hispanic ELs whose parents waived ESOL services were less likely to eventually attend college (Flores, Batalova, & Fix, 2012).

It is likely, however, that ESOL programs do not benefit all ELs equally, but that their effects depend largely on the qualities of the program, the characteristics of the student being considered for placement, and the situation in the mainstream classes from which that student is removed. ESOL classes must provide age-appropriate and meaning-focused literacy-building opportunities in a rigorous but supported on-grade-level content-based approach instead of dumbed down and childish, decontextualized, remedial instruction (Short, Boyson, & Coltrane, 2003;

[16] "Add Health" is the National Longitudinal Study of Adolescent Health, a study that followed a nationally-representative sample of high school students for nearly thirteen years (University of North Carolina Population Center, 2011).

Lucas, 1997). Sheltered ESOL classes[17] with these qualities are more effective than inclusion in mainstream classes for ELs who are newly-arrived and have low English proficiency (Gibson, 1988), especially when they have LFS (Short, Boyson, & Coltrane, 2003; Lucas, 1997). They may be less effective, however, for ELs who have spent many years in the U.S. (Callahan, Wilkinson, & Muller, 2010) and have the English proficiency, formal school background, or family support they need to function in college preparatory mainstream classes (Gunderson, 2000; Gibson, 1988). More importantly, however, the learners themselves must exercise personal agency, or take action and responsibility for their language learning, for ESOL classes to be effective, regardless of the type of instruction offered (Hawkins, 2005; Rymes & Pash, 2001).

2.3.2. Personal Risk Factors.

In previous sections of this literature review, I reviewed the research on the detrimental effects of LFS and LEP on ELs' educational outcomes, as well as how school-related protective factors may improve educational outcomes. This section focuses on additional factors beyond the school context that may negatively influence SLIFE educational outcomes, including factors such as past traumatic experiences, separations from caretakers, large perceived social distance, non-educationally oriented peers, a lack of authoritative parenting, and employment. Due to the lack of research specifically on SLIFE, this section relies heavily on research on groups that are not specifically SLIFE, namely general ELs, language minorities, refugees, labor migrants, and immigrant adolescents. The risk factors presented in this section do not represent an exhaustive list, but instead include those that have the most relevance for

[17] See pages 18-19 for a description of sheltered ESOL classes.

the population of the study and are within the scope of this study and its theoretical framework. My choice to exclude certain risk factors from this study should not imply that I consider them unimportant.

Traumatic experiences. Past traumatic experiences, such as being witnesses to or victims of natural or man-made violence, may negatively influence SLIFE educational outcomes. In fact, research shows that ELs with low or declining GPAs are more likely to have had traumatic experiences before coming to the U.S. (Suarez-Orozco et al., 2010). Unfortunately, such experiences may be common among SLIFE (Siu, 1996), especially those who come as refugees, and therefore, are more likely to have experienced or witnessed torture, rape, or massacres (Allodi, 1986). Likewise, those who are undocumented immigrants are also more likely to have been affected by violence (Capps, Castaneda, Chaudry, & Santos, 2007), just as all impoverished ethnic or racial minority youth in the U.S. are more likely to experience violence (Aud, Fox, & KewalRamani, 2010).

Experiences with violence may cause a condition called post-traumatic stress disorder (PTSD) that is believed to adversely affect academic outcomes, including grades and attendance, for many years after the actual event (Allodi, 1986; Arroyo & Eth, 1996). ESOL teachers who work with ELs suffering from PTSD report that they often appear unmotivated due to inconsistent attendance or classroom behaviors such as staring out the window during lessons (Isserlis, 2010). PTSD symptoms that directly affect learning include confusion (Allodi, 1986), memory loss (Allodi, 1986; Bekar, 1994), inability to concentrate or pay attention (Arroyo & Eth, 1996; Davis & Siegel, 2000), hyperactivity (Fazel & Stein, 2003), loss of interest or motivation

(Randall & Lutz, 1991; Isserlis, 2010), flashbacks, learned helplessness (Randall & Lutz, 1991), and irrational anxiety (Segal, 1983). Symptoms that would indirectly affect learning are emotional disturbance, conflicts with peers (Fazel & Stein, 2003), depression (Randall & Lutz, 1991; Bekar, 1994), sleep problems, resistance to authority (Bekar, 1994), irritability, substance abuse, (Randall & Lutz, 1991), or psychosomatic illness (Segal, 1983). Moreover, PTSD affects the very characteristics associated with resilience, including resilience to the PTSD itself, namely self-esteem (Bekar, 1994), trust in others (Randall & Lutz, 1991; Bekar, 1994), and self-efficacy (Randall & Lutz, 1991). Thus, we may conclude that past experiences with violence may be one of the most disabling factors SLIFE can have.

Separations from caretakers. Just as families are vital protective factors in influencing children's educational outcomes, disruptions of those relationships are a major risk factor. Unfortunately, immigration circumstances often force families to separate. In one study of immigrant children, Suarez-Orozco and Suarez-Orozco (2001) found that only 15% of all the immigrant children in their study had arrived with their entire family at once. Most children were separated from some or all of their family as their family unit moved piece by piece to the U.S. This was especially common among immigrants from certain countries of origin, especially Central American countries or Haiti. In fact, they found that about 80% of the Central American children were separated from both parents during immigration with 49% of those separations lasting for five years or more. Other studies show that undocumented immigrants face an even higher risk of family separation (Menjivar, 2008) and the separations appear to be more traumatic and disruptive in nature,

especially if they result from immigration detentions and deportations (Capps, Castaneda, Chaudry, & Santos, 2007).

These findings regarding separations from caretakers are important since research shows that such separations are associated with lower educational outcomes (Suarez-Orozco et al., 2010), especially when the separations are long and involve the absence of both parents (Wright, 2010). Immigrant children who have been separated from one or more of their parents tend to expect less of themselves in the present and future than those who have not (Wright, 2010). Researchers have also found that children who have been separated from parents are more likely to report depression symptoms (Suarez-Orozco & Suarez-Orozco, 2001) and are less resilient to other risk factors such as traumatic or stressful situations (Burbury, 1941). The effects of these separations may depend largely on the child's perceptions of these separations and their cultural context, however (Suarez-Orozco & Suarez-Orozco, 2001). In some societies, it is acceptable for children to stay with relatives away from one or more of their parents for an extended period, but when children are in a society where those separations are considered abnormal, they may perceive and internalize harmful attitudes from teachers and staff that their parents are neglectful.

Nevertheless, we may conclude that separations from caretakers affect educational outcomes of immigrant children both directly and indirectly through effects on components of academic self-concept, such as whether they have educational goals or whether they feel they are in control of their outcomes in the U.S.

Large perceived social distance. Schumann (1976) and others (Portes & Bach, 1985) have used the concept of "social distance" to describe the relationship between immigrants and the dominant cultural group in their host country and have suggested that social distance may affect acculturation and language learning. According to Schumann (1976), some immigrants may feel they have a small social distance between them and the dominant group, as indicated by their having plans that involve long-term interactions with the dominant group, a feeling of respect for the dominant group's culture, and a feeling that the dominant group respects them in return. In such cases, immigrants are more likely to learn the language and culture of the dominant group. Other immigrants, however, may feel a large social distance as indicated by lack of reasons to invest the time and effort to learn the language and culture of the dominant group. In particular, they may feel they are only temporarily in the country and have no long-term plans that involve the dominant group in their host country. They also may not respect the local language and culture, or even worse, find natives to be rude, unfriendly, hostile, or prejudiced against them, their culture, and their language. In sum, for ELs perceived social distance from "mainstream Americans" (i.e. members of the dominant culture of English speakers in the U.S.) influences whether an immigrant feels it is worthwhile to invest time and energy in learning the language and culture of his or her host country.

Although perceived social distance from mainstream Americans may be closely related to social integration at school, the two factors are different in that the first describes how the immigrant child's immigrant community relates to the dominant cultural group as a whole, while the second describes how the immigrant

child as an individual relates to peers from the dominant cultural group at school. While the child's experiences with the dominant culture at school surely affect his/her perceptions of social distance in the greater context (Alva, 1993) and vice versa, the two factors may probably also vary independently. For example, it is possible that a child could have positive experiences with peers from the dominant group at school, but still perceive prejudice from teachers and a large social distance from mainstream America. Medvedeva (2010), for instance, when studying the effects of perceived prejudice on ELs, found that ELs sometimes perceived prejudice from their "American" peers, but not from "mainstream" U.S. culture, and likewise, sometimes perceived prejudice from "mainstream" U.S. culture but not from "American" peers. Interestingly, Medvedeva (2010) found that if they perceived prejudice from general society but not from peers, ELs were more likely to make greater gains in English speaking in the hope of overcoming the disadvantages facing them in the outside world, but if they perceived prejudice from their "mainstream American" peers in school, they were more likely to make slower English speaking gains (Medvedeva, 2010). Thus, we can conclude that these two factors may have separate but interactive effects.

Furthermore, the construct of social distance is relevant to this study since it combines factors such as racism and ethnocentrism with immigrant identity and motivations for education (Peirce, 1995). It incorporates powerful factors such as perceived discrimination in society, feelings of hopelessness caused by immigration problems, and feelings of hostility or ambivalence towards mainstream America, the English language, and U.S. education. We can reasonably expect, for example, that

the harmful effects of having an undocumented immigration status, a factor I cannot ethically survey in this study, will appear on measures of social distance, as an undocumented immigrant is probably more likely to feel uncertain about his or her future in the U.S. (Gunderson, 2000). I suspect that the concept of social distance from mainstream America may help us understand ELs' motivation in choosing to learn, or not learn, the English language. The concept of social distance may also help us explain the motivation, and therefore, the educational outcomes of adolescent immigrants in U.S. schools since immigrants tend to view education as the gateway to successful acculturation into America's dominant culture.

Another aspect of social distance from mainstream America, having long-term plans involving the dominant culture, may be also important for explaining the educational outcomes of SLIFE. Long- term plans with the dominant culture, such as employment and education, are essentially sources of what is known as "instrumental motivation"[18] (Gardner & MacIntyre, 1991), which is shown to be helpful for language learning. In other words, long-term plans to pursue higher education or professional careers in the U.S. are reasons for immigrant youth to invest more effort in their current education. Similarly, a lack of "instrumental motivation" may help explain why recent-arrival Mexican and Central Americans adolescents, for example, have low rates of school enrollment in the U.S. (Fry, 2007; Ruiz-de-Velasco & Fix, 2000; DebBurman, 2005), since they are more likely to be labor migrants who have come here with short-term plans to earn money to send home (Johnson, Levy, Morales, Morse, & Prokopp, 1986). When labor migrants are forced to choose

[18] Instrumental motivation is motivation to learn a second language for practical purposes such as earning a grade or getting a job as opposed to social purposes such as social integration.

between schooling and income for their families, they often choose income (Johnson, Levy, Morales, Morse, & Prokopp, 1986). Thus, for immigrant youth, social distance from mainstream Americans may affect the degree to which they are academically oriented in U.S. schooling regardless of the value they place on education in general.

Another aspect of social distance, mainstream Americans' attitudes toward the dominant culture, is probably also an important factor affecting the educational outcomes for ELs. Attitudes about a language and its cultural group have long been believed to influence its acquisition (Macnamara, 1975). When a learner has very positive attitudes toward a cultural group and wants to learn its language to become socially integrated, the learner is said to have "integrative motivation" (Gardner & MacIntyre, 1991), which is believed to be highly effective for language learning (Gardener & Lambert, 1972; Spolsky, 1969; Gardener, Day, & MacIntyre, 1992).

Likewise, perceived prejudice, specifically, the belief that one's cultural group is deemed as inferior by the dominant cultural group, can influence the learning of the dominant culture's language (Schumann, 1976). In this case, ELs' perception that mainstream Americans as a whole are prejudiced against them is a powerful indicator of perceived social distance that can affect educational outcomes in a number of ways. One is that such a perception harms ELs' self-esteem (Suarez-Orozco & Suarez-Orozco, 2001), which is an important component of the academic self-concept they need for educational resilience (Gordon Rouse, 2001). Even more dangerous is that young ELs can internalize and believe the negative attitudes they see the dominant society holds about them (Suarez-Orozco & Suarez-Orozco, 2001) and then

take on those characteristics, including lower academic performance (Schmidt, 2002; Bigelow, 2008).

Unfortunately, immigrant children and ELs often believe that "mainstream Americans" have negative views about them (Suarez-Orozco & Suarez-Orozco, 2001) and discriminate against their ethnic group (Medvedeva, 2010).

Non-educationally-oriented peers. Although ELs, like other recent-arrival immigrant youth (Fuligni, 1997), are more likely than native-born youth to have friends who are educationally oriented (Suarez-Orozco, Suarez-Orozco, & Todorova, 2008; Duff, 2001; Goldstein, 2003), they may often find themselves in the company of peers who are not educationally oriented, especially considering that they are more likely to attend low-achieving urban schools that are majority minority and high poverty (de Cohen & Clewell, 2007).

Much of the research on minority students' under-achievement attributes their lower educational outcomes to pressure from peers who are oppositional to educational authority (Ogbu, 1978; Fordham & Ogbu, 1986). Some have contended that immigrant children assimilating to low-performing and oppositional groups may become similarly non-educationally oriented in the process (Bigelow, 2008; Portes & Zhou, 1993). Thus, having non-educationally oriented peers could be a risk factor for ELs if these students begin conforming to a peer group that is not educationally oriented. Research shows that peer influences are very important for the educational outcomes of immigrant youth (Suarez-Orozco, Suarez-Orozco, & Todorova, 2008; Duff, 2001; Goldstein, 2003; Fuligni, 1997; Bankston & Zhou, 1997). Studies find that low-achieving Hispanic youth generally have low-achieving peers (Gandara &

Contreras, 2009); children of immigrants with lower educational outcomes are less likely to have peers who say they are college bound (Rumbaut, 2000); and students who have peers who drop out are more likely to drop out themselves (Rumberger, 2004).

The effect of negative peer influences on ELs may be moderated or mediated by the ELs' academic self-concept, however. In other words, the influence of peers on a particular EL, may depend on that EL's academic self-concept. Likewise, academic self-concept, like general self-concept, probably also depends on the peers with whom the adolescent EL identifies.

A lack of authoritative parenting at home. Children who are raised by parents who have an authoritative parenting style tend to have better educational outcomes than those who are raised by parents who are authoritarian, permissive, negligent, or frequently unable to be present to supervise their children well (Baumrind, 1966; Dornbusch, Ritter, Leiderman, Roberts, & Fraliegh, 1987).

Authoritative parenting is characterized by love, reasoning, clear and consistent expectations, and strong support in meeting those expectations (Dornbusch, Ritter, Leiderman, Roberts, & Fraliegh, 1987). Children who are raised by parents with authoritative parenting styles have been found to have better educational outcomes because they learn to reason, take responsibility for their circumstances, and believe in themselves (Dornbusch, Ritter, Leiderman, Roberts, & Fraliegh, 1987). This parenting style has been shown to be a protective factor for at-risk students such as labor migrants (Garza, Reyes, & Trueba, 2004). Likewise,

students who lack authoritative adult supervision are more likely to drop out of school (Rumberger, 1995).

One major component of authoritative parenting, having high parental expectations for their children's education, has been shown to be very influential to immigrant children's educational outcomes (Garcia Coll & Marks, 2009). Parents' educational expectations have been shown to significantly affect the grades of Asians (Kao, 1995; Kao & Tienda, 1995) and ELs (Suarez-Orozco, Suarez-Orozco, & Todorova, 2008), as well as the SAT scores of Hispanics (Gandara & Contreras, 2009) and math and reading scores for Asians (Kao, 1995).

In order to be effective, parents must be able to provide their children with the support and supervision they need, however. Unfortunately, immigrant family relationships are often disrupted due to immigration situations before, during or after arrival in the U.S. (Capps, Castaneda, Chaudry, & Santos, 2007; Suarez-Orozco & Suarez-Orozco, 2001), making it harder for families to provide consistent effective adult supervision for all their children (Suarez-Orozco, Suarez-Orozco, & Todorova, 2008; Suarez-Orozco, 2010; Glick & Hohmann-Marriott, 2007; Rumbaut, 2000). Also, immigrant parents often have to work many hours and at odd times, so they might not be able to be at home to supervise their children as much as they would like (Gandara & Contreras, 2009). In such circumstances the children are more likely to skip school or neglect homework, negating much of the positive influence of the parents' high expectations (Gandara & Contreras, 2009). It is likely that these situations are more common among SLIFE, who are reportedly more likely to be in

the U.S. unaccompanied by adults, be labor migrants, and/or come from high poverty families (Siu, 1996).

Logically, family structure would be instrumental in determining whether the family is able to provide effective adult supervision at home, but it is not so simple. For example, one study found that children of Asian single mothers had significantly better educational outcomes on average than White children of single mothers when controlling for family income, LEP, and the educational background of the parent (Kao, 1995). The number of parents may be important but only to the degree to which each parent is effective in supporting better educational outcomes. It may also not be necessary that the adult supervision be the mother and father for it to be effective. Immigrant families are also more likely to be multigenerational, and therefore, have more adults at home to provide supervision and support for their children, even if they lack one or more biological parent (Suarez-Orozco, Suarez-Orozco, & Todorova, 2008). In fact, there is research specifically with undocumented immigrants that did not find significant differences between the GPAs of students with two biological parents and students with one and specifically attributed it to the presence of extended families (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009).

In conclusion, a lack of authoritative adult supervision at home may be a risk factor for ELs and may be more common among SLIFE due to their economic or immigration circumstances. Youth need caring and present adults in order to be resilient (Werner & Smith, 2001) and without them are likely to be at much greater risk.

Employment. SLIFE are often under pressure to work to help support their family because they are more likely to live in poverty and less likely to be eligible for most government social services (Ruiz-de-Valasco & Fix, 2000). This is unfortunate, since working many hours after school is generally believed to be an academic risk factor for adolescents (Steinberg & Dornbush, 1991; Singh, Chang, & Dika, 2007). Compared with students who do not work, students with part-time jobs have poorer academic outcomes; namely, lower attendance, grades, and educational aspirations (Singh, Chang, & Dika, 2007), as well as higher rates of dropout (Rumberger, 2004; Chaplin & Hannaway, 1996; Rumberger, 1995; Ortiz-Licon, 2009) and other high-risk variables such as drug and alcohol use (Steinberg & Dornbush, 1991). Lower educational outcomes for students who work twenty hours a week have been found in studies with undocumented immigrants (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009) as well as children of immigrants (Kao & Tienda, 1995) even when controlling for other variables such as lower socio-economic status, race, or past educational performance that might account for such differences. Interestingly, however, one study specifically with ELs found that ELs who had jobs while in high school were more likely to eventually attend college and attributed to greater levels of personal responsibility (Flores, Batalova, & Fix, 2012). Nevertheless, it is understandable that employment, regardless of its benefits, takes time away from studying and educational enrichment activities.

Conclusion. This literature review shows that SLIFE may have many risk factors other than LFS that might explain their lower educational outcomes. Some of these risk factors may cause lower educational outcomes, but others may affect

outcomes indirectly by affecting academic self-concept. Regardless, any study that intends to estimate the effect of LFS, school protective factors, or academic self-concept on educational outcomes, will have to control for these other risk factors in order to make accurate estimates.

2.3.3. The Mediating/Moderating Role of Academic Self-Concept.

According to Gordon Rouse (2001), at-risk students who are persistent, and therefore resilient in their educational outcomes, have strong academic self-concepts. Academic self-concept is a person's perception of himself/herself regarding academics and is for the most part a self-assessment based largely on past experiences with academics and the evaluations of others (Shavelson, Hubner, & Stanton, 1976; Gordon Rouse, 2001). Because it is strongly influenced by other people's judgments (Diaz, 2003), it may be influenced by experiences with other people's prejudices; and therefore, often becomes a contested area in which the individual tries to assert one identity at the same time that other people or institutions that would instead impose another (Peirce, 1995; McKay & Wong, 1996). This conflict is well-illustrated by the example of the EL who considers himself to be "a good student" bound for a bright future, but is considered incompetent by others on account of his/her lack of English proficiency and is eventually convinced of this through repeated failure.

A student's academic self-concept is a very serious matter, since it is strongly associated with educational outcomes (Covington, 1992; Skinner, 1995; Vermeer, Boekaerts, & Seegers, 2000). Research shows that a positive academic self-concept is important for the academic outcomes of Hispanics (Waxman, Huang, & Padron, 1997), Southeast Asians (Vargas-Reighley, 2005), children of immigrants (Rumbaut,

2000), ELs (Padron, Waxman, Brown, & Powers, 2000; Waxman, Rivera, & Powers, 2012), and children of migrant workers (Prewitt-Diaz, Trotter, & Rivera, 1990; Johnson, Levy, Morales, Morse, & Prokopp, 1986).

According to Gordon Rouse and Cashin's (2000) operationalization of this variable, students with high academic self-concepts have academic goals, high academic self-efficacy, an internal locus of control over academic contexts, and strong beliefs about academic goals being personally worthwhile.

Academic goals. The term "academic goals," as used by Gordon Rouse & Cashin (2000), can be equated with "educational aspirations," since both are related to long-term educational plans, namely plans to graduate high school and pursue a higher education (Dinh, Weinstein, Kim, & Ho, 2008; Feliciano, 2006; Rumbaut, 2000; Kao & Tienda, 1995; Fuligni, 1997). Research shows that, on average, children of immigrants have higher educational aspirations than native-born whites (Feliciano, 2006; Fuligni, 1997). Foreign-born youth, and especially recently-arrived immigrants, tend to have even higher aspirations than native-born children of immigrants (Dinh, Weinstein, Kim, & Ho, 2008; Feliciano, 2006; Rumbaut, 2000; Kao & Tienda, 1995).

As Gordon Rouse (2001) points out, academic goals are very important, because without goals, one lacks a reason to invest effort in education. Research shows that high-achieving Hispanics have much higher educational aspirations than other Hispanics (Gandara & Contreras, 2009) even after controlling for other variables such as LEP or socio-economic status that could be affecting both (Waxman, Huang, & Padron, 1997). Similar patterns have been found with children

of immigrants (Park, 2001), and ELs (Dinovitzer, Hagan, & Parker, 2003). The strongest effect is in GPA where effort, the product of aspirations, has the most impact (Dinh, Weinstein, Kim, & Ho, 2008; Feliciano, 2006). In fact, due largely to their higher educational aspirations, first generation immigrant youth have higher GPAs on average than children of native-born parents of similar race and socio-economic status (Kao & Tienda, 1995). Likewise, having low educational aspirations is one of the strongest predictors of dropout for all students (Rumberger, 1995; Rumberger, 2004). Reports from agencies serving migrant workers show that migrant children who choose to drop out of high school are more likely to lack academic goals (Johnson, Levy, Morales, Morse, & Prokopp, 1986).

It may be, however, that immigrant students generally arrive with high academic goals but lower their expectations over time because of their interactions with the social context. It is not uncommon for immigrant students to become distracted by non-academic activities such as employment (Gandara & Contreras, 2009) or have negative experiences that discourage them (Alva & Padilla, 1995), such as being held back from grade-level academic coursework due to LEP (Derwing, Decorby, Ichikawa, & Jamieson, 1999), or realizing their family cannot afford to send them to college (Rumbaut, 2000). All these factors negatively affect their educational aspirations.

Academic self-efficacy. Another important component of academic self-concept is academic self-efficacy (Gordon Rouse, 2001). Academic self-efficacy is defined as a person's beliefs about his or her own capability to learn under given conditions (Bandura, 1997). Research shows that academic self-efficacy is a

predictor of higher grades for high school ELs (Dinovitzer, Hagan, & Parker, 2003) and children of migrant workers (Garza, Reyes, & Trueba, 2004) because it is related to an individual's willingness to invest effort (Covington, 1992; Stipek, 1988; Vermeer, Boekaerts, & Seegers, 2000; Ryan, Gheen, & Midgley, 1998).

Academic self-efficacy seems to be strongly influenced by past academic experiences. Past academic successes with their first language even before immigrating can benefit ELs' academic self-efficacy (Fox, Kitsantas, & Flowers, 2008; Burtoff, 1985). Likewise, SLIFE may arrive feeling unsure about their abilities to succeed in school since they lack experience with formal schooling and may feel ashamed of their academic "deficiencies" or "challenges" (Brown, Miller, & Mitchell, 2006). Later, when ELs live in the U.S., their educational experiences in U.S. schools continue shaping their academic self-efficacy. For example, in interview research, educationally resilient migrant youth attributed their high academic self-efficacy to having had opportunities to successfully participate in championships and events for public speaking that boosted their confidence and pride while in the U.S. (Garza, Reyes, & Trueba, 2004). However, failure and discrimination can lead to low academic self-efficacy with a feeling of academic hopelessness (Alva & Padilla, 1995) that often precipitates a drop in attendance (Um, 2003) and a sharp decline in academic outcomes (Suarez-Orozco et al., 2010). From research on academic self-efficacy, we can see that it is part of a process by which either resilience or vulnerability is produced.

Internal locus of control in academic contexts. Another important component of academic self-concept is locus of control (Gordon Rouse, 2001;

Gordon Rouse & Cashin, 2000). Locus of control refers to a student's beliefs about who or what is responsible for his or her situation and outcomes (Nowicki & Strickland, 1973). Although students' locus of control may be rooted in beliefs about the world acquired from the student's parents or homeland, it is also formed by the student's perceptions of his or her current situation (Sue & Okazaki, 1990; Alva, 1993). Students who feel well-supported to achieve realistic academic goals are more likely to feel they can control whether or not they succeed in those goals (Skinner, 1995; Vermeer, Boekaerts, & Seegers, 2000). Likewise, students who feel they are unsupported, have been given unachievable objectives, or face resistance and interference are less likely to feel in control, and therefore, also less likely to invest effort to succeed in their objectives. Consequently, an internal locus of control, or belief that one is empowered to influence outcomes, is common among all resilient youth (Luthar, 1991).

Belief that education is personally worthwhile. Cultural anthropologist, John Ogbu (1978), has suggested that the belief that education is personally worthwhile is one of the main reasons why immigrant minorities (i.e. minorities who chose to come to the U.S.) tend to have better educational outcomes than native-born minorities, such as African-Americans or Native Americans, whose ancestors became minorities unwillingly due to conquest or slavery. Ogbu (1978) asserts that immigrant minorities value education as part of their belief in "folk theories" such as "the American Dream" in which young people who work hard in school can have better lives in adulthood despite coming from backgrounds of poverty. Ogbu (1978) also explains that someone coming from a country that does not offer opportunities

such as high-quality public education might have a completely different "frame of reference" when looking at the U.S. public school system, and would be more likely to view it as an opportunity not to be taken for granted.

Research confirms Ogbu's theories that, due largely to the influences of their immigrant parents, immigrant children have stronger beliefs in the value of education on the average than other children, and that these beliefs cause them to have higher educational aspirations and educational outcomes (Suarez-Orozco & Suarez-Orozco, 2001; Rumbaut, 2000; Fuligni, 1997). Research with SLIFE (Bigelow, 2007; Bartlett, 2007), SLIFE minors arriving as unaccompanied refugees (Luster, Johnson, & Bates, 2009; Duncan, 2001), and undocumented immigrants (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009; Gibson, 1997) show the same patterns. Logically, people who believe education will benefit them are more likely to want more education. Similarly, people who value education are more likely to invest effort to achieve their educational goals (Gandara & Contreras, 2009; Ainsworth-Darnell & Downey, 1998).

Interestingly, the strong belief immigrant youth have in the value of education is not always countered by the realization that they face limited opportunities due to discrimination and economic injustice; in fact, sometimes the belief in education is actually strengthened as the immigrant youth realize they will have to work harder and be better than other Americans to overcome prejudice (Gibson, 1988). It may be, as Ogbu (1978) asserts, that having another country as a frame of reference allows immigrant children to be more persistent in pursuing their education in the face of prejudice.

Conclusion. Academic self-concept may be one of the most important factors moderating or mediating the educational outcomes of SLIFE. It is likely that school-related protective factors will only be as protective as the students' academic self-concepts allow and that the harmful effects of certain risk factors may be buffered by a strong academic self-concept. It also seems, however, that SLIFE academic self-concepts are strongly influenced by their English proficiency, schooling background, school-related protective factors, and personal risk factors. Research on these phenomena will inform interventions aimed at strengthening SLIFE academic self-concept for stronger student motivation instead of just improving their academic outcomes without improving their motivation. The next section will briefly explain additional factors that may affect the educational outcomes and academic self-concept of SLIFE.

2.3.4. Other Theoretically Relevant Constructs for Understanding the Educational Outcomes of SLIFE.

This literature review finds that length of residence in the U.S., age, and parental education are important factors to consider when explaining the variability in the educational outcomes of ELs. These factors will be included in my theoretical discussion and analytical strategy given that they could be important confounders when trying to understand the relationships between LFS, risk factors, school-related protective factors, academic self-concept, and educational outcomes. The fact that I have chosen not to include other important factors such as race or gender does not mean that I consider them unimportant, but simply that they are beyond the scope of this study.

Length of residence in the U.S. The length of time SLIFE have spent in the U.S. affects their educational outcomes in complex ways, probably depending on their academic self-concept and the support they receive in overcoming LEP and LFS.

Firstly, the longer length of residence may be beneficial in areas more dependent on skills, like English proficiency or academic skills that increase over time for immigrant children (Portes & Macleod, 1996; Suarez-Orozco, Suarez-Orozco, & Todorova, 2008). For example, longer length of residence is significantly associated with higher standardized test scores for reading and math (Portes & Macleod, 1996). Therefore, the positive effect of length of residence is not actually the effect of residence in the U.S., but the diminished effect of educational disadvantages for recent-arrivals with LFS or LEP. Studies agree that length of residence is a significant predictor of English proficiency, which in turn is a significant predictor of grades and standardized test scores (Suarez-Orozco, Suarez-Orozco, & Todorova, 2008). Length of residence may be especially important for adolescent SLIFE arriving at a later age, since they are in a race against time in which they must learn enough English and academic content to catch up from being below grade level in time to meet graduation standards (Short, Boyson, & Coltrane, 2003). Arriving earlier might give them the time they need to make the progress and close that gap, but their rate of language acquisition might depend on other factors than just time because it is unlikely that time alone could cause learning to take place (Thomas & Collier, 2002). Other factors, such as social integration with native speakers of English (Saville-Troike, 1984) or academic support such as ESOL classes (Callahan,

Wilkinson, Muller, & Frisco, 2009), also play some role in helping them overcome disadvantages such as LEP.

For ELs, not all outcomes improve over time, however. Paradoxically, ELs tend to earn lower grades if they have spent more time in the U.S. (Bang, Suarez-Orozco, Pakes, & O'Connor, 2009; Rumbaut, 2000), even though LEP is associated with lower grades (Rumbaut, 2000; Suarez-Orozco et al., 2010; Crosnoe & Turley, 2011). ELs' grades do not necessarily improve as they acquire English (Bang, Suarez-Orozco, Pakes, & O'Connor, 2009). This may be due to the fact that grades depend at least as much on effort as skills, and effort in ELs often declines over time as their optimism declines over time (Bang, Suarez-Orozco, Pakes, & O'Connor, 2009; Suarez-Orozco et al., 2010).

Thus, we return to the domain of academic self-concept, since it explains academic effort and optimism (Gordon Rouse, 2001; Ford, 1992). It seems likely that immigrant students are optimistic when they first arrive, and this optimism may boost their academic self-concept leading to better outcomes in areas, such as grades, that are strongly affected by effort (Bang, Suarez-Orozco, Pakes, & O'Connor, 2009). This sense of hope or optimism often diminishes over time, however, and grades also decline with it (Suarez-Orozco, et al. 2010; Perez, Espinoza, Ramos, Coronado, & Cortes, 2009). Researchers have also suggested that longer length of residence in the U.S. may be associated with declining educational aspirations when ELs are faced with disappointments related to LEP (Park, 2001), low academic skills (Gibson, 1988), or immigration status (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009).

Thus, one may conclude that the effects of length of residence will differ greatly depending on how time interacts with other variables. Likewise, we may suspect that the effects can be explained by other variables such as exposure to English while in the U.S., the quality and quantity of academic support services, LFS, LEP, and more, but that students' academic self-concept may be the cornerstone of all these factors.

Age may be an important factor affecting the educational outcomes of SLIFE, but its effects may depend on several considerations.

Firstly, members of the general public tend to believe that younger people learn second languages more successfully due to certain innate abilities they possess, and this literature review has already shown that English proficiency is vital for success in U.S. English-only schooling. This notion is commonly referred to in linguistics as the Critical Period Hypothesis (Lenneberg, 1967). However, many researchers contest the Critical Period Hypothesis for second language acquisition; in fact, there is a great deal of research contradicting this popular belief (Lightbown & Spada, 2000). Researchers have found that, with the exception of pronunciation and certain grammar forms, older learners actually have advantages over younger learners (Snow & Hoefnagel-Hohle, 1978). For example, some researchers have claimed that an educated and literate person starting to learn English for academic purposes at a later age can reach a higher level of mastery much faster than a person starting at a younger age who has not yet become educated and literate in his or her first language (Thomas & Collier, 2002). This, however, would not apply to SLIFE who begin their English learning with limited L1 literacy and schooling.

Age may influence other educational outcomes besides English learning. Studies that control for important covariates, such as English proficiency, in their estimates have shown that immigrant children who immigate to the U.S. at a later age have better educational outcomes on average than those who arrive at a younger age (Glick & White, 2003; Stiefel, Schwartz, & Conger, 2010). Thus, while having limited English proficiency is a disadvantage, older age immigrant students must have certain other advantages.

Another important consideration is age relevant to grade. Being overage for one's grade is commonly assumed to be another stressful event that puts a student at risk for failure (Siu, 1996). This is important for recent-arrival immigrants since they are much more likely to be overage for their grade due to arriving at an older age without secondary school credits (Glick & White, 2003). Being overage has been shown to be a strong and significant predictor of lower scores on standardized tests of math and reading and may even predict slower improvement. Interestingly, however, with ELs, being overage is both significantly associated with being a high achiever and being a low achiever (Suarez-Orozco, Bang, O'Connor, Gaytan, Pakes, & Rhodes, 2010). There may be benefits from maturity or previous schooling that balance against the stigmatizing experience of being overage for one's grade.

Parental education is an important factor for educational research because it is an indicator of socio-economic status, which has been shown to be significantly associated with educational outcomes for U.S. born adolescents (Coleman, 1990) and immigrant youth (Glick & White, 2003). However, measures of socio-economic status such as family income, parental occupation, or housing may not be reliable for

immigrants since immigrants may lack income, employment, and housing that matches their homeland socio-economic status when they are newly-arrived and still settling in (Thomas & Collier, 1997). Even long after they settle in, immigrants' socio-economic status in the U.S. may not match their income in their homeland (Menjivar, 2008). For this reason, researchers with recent-arrival immigrants recommend using parental education as an indicator of socio-economic status because it does not get lost or change during the immigration process (Menjivar, 2008; Thomas & Collier, 2002).

Low-parental education may have important educational implications. For example, immigrant adolescents ages 16 to 18 are significantly less likely to be enrolled in school if they have a father with limited or no formal schooling, even when holding other variables constant (DebBurman, 2005). Low-parental education has been shown to be associated with low educational attainment for children of migrant workers (Johnson, Levy, Morales, Morse, & Prokopp, 1986) and ELs (Dinovitzer, Hagan, & Parker, 2003). ELs (Suarez-Orozco et al., 2010) and other children of immigrants (Kao & Tienda, 1995), whose parents have low or no formal schooling, have lower GPAs, lower standardized test scores for math (Kao & Tienda, 1995; Kao, 1995; Glick & Hohmann-Marriott, 2007), slower acquisition of English (Suarez-Orozco, Suarez-Orozco, & Todorova, 2008) and lower English literacy (Thomas & Collier, 1997). In fact, much of the Asian "model minority" phenomenon can be explained by differences in parental education (Kao, 1995) as can achievement differences within racial groups (Tienda & Mitchel, 2006; Kao & Tienda, 1995).

Yet, there are also studies that found no significant effect for parental education on immigrant children's educational outcomes. One study with undocumented immigrants, for example, found parental education had no significant effects on honors/AP placement, GPA, or high school awards after controlling for differences in hours spent working, feelings of societal rejection due to immigration status, and family size (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009). Similarly, some researchers have found that children of immigrants are doing very well in school despite having parents with low education (Gibson, 1988; Garcia Coll & Marks, 2009). Qualitative interviews suggest that language minority parents' intellectual influence is not necessarily dependent on their formal schooling (Gandara & Contreras, 2009). Those studies show that many low-schooled parents can read newspapers, discuss politics, and thereby impress an intellectual identity upon their children.

2.3.5. Conceptual Model.

After reviewing the extensive literature on factors that might be affecting the educational outcomes of high school SLIFE, I identify in my conceptual model the most relevant factors and relations for understanding the educational outcomes of SLIFE. For parsimony, control variables (length of residence in the U.S., age, and parental education) are not reflected in the visualization of this model but are included in some of the statistical analyses.

As Figure 1 shows, I hypothesize that the educational outcomes of SLIFE are a function of the interaction between key protective and risk factors. The variables included in the conceptual model have been shown in research to be the most relevant

factors affecting the educational outcomes of SLIFE. I propose that the prevalence of the school-related protective factors may neutralize the initial educational disadvantages associated with having LFS. For example, having high perceived pedagogical caring and effective support services may positively affect the educational outcomes of SLIFE, because they help them acquire the skills needed for success in school and have higher educational outcomes. Given the pervasive nature of the risk factors identified in the literature review, however, I expect that they will negatively impact SLIFE educational outcomes.

In my conceptual model, academic self-concept plays a significant role in the educational experiences of SLIFE. Researchers claim that students with more robust academic self-concepts tend to have strong academic goals, believe those goals are worthwhile, believe they are personally capable of doing whatever is necessary to achieve those goals, and believe that their environments are facilitative of those goals (Gordon Rouse, 2001; Gordon Rouse & Cashin, 2000). Those characteristics may lead to better educational outcomes, but may also be influenced by personal risk factors or school-related protective factors. For example, students who have never experienced academic success in the past may feel inadequate about their abilities when they compare themselves to other students who are much better prepared. Likewise, academic self-concept is also influenced by students' perceptions that their environment is either supportive and rewarding or not supportive and rewarding of their academic goals.

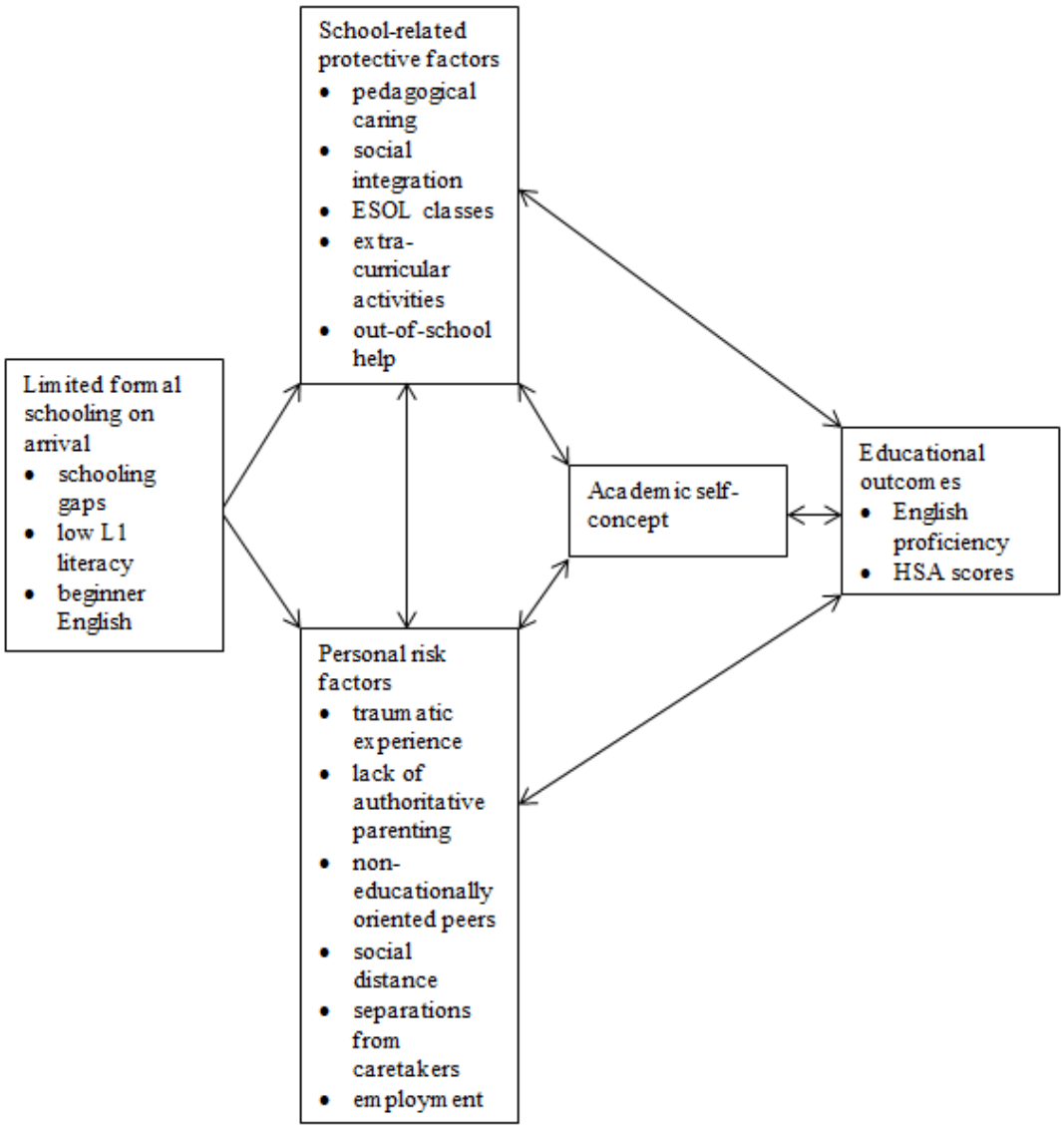

Figure 1.

The Conceptual Model

At the same time, I hypothesize that academic self-concept may mediate or moderate the relationship between school-protective factors and educational outcomes. In other words, the influence of the protective or risk factors on the educational outcomes of SLIFE may take place through their effect on academic self-concept, which in turn determines educational outcomes (i.e. mediating), or the effect

of the risk and protective factors on the outcomes may depend upon the students' academic self-concept (i.e. moderating). Thus, we see that resilience or vulnerability is not simply a result of factors, but instead, a result of a complex process in which many factors interact and feed one another.

Based on this conceptual model, this study will specifically look at: 1) protective factors such as perceived pedagogical caring, participation in support programs, and perceived social integration; 2) risk factors, such as traumatic experiences, separations from caretakers, social distance, the lack of authoritative adult supervision, and employment; 3) academic self-concept; and 4) the educational outcomes of ELs and SLIFE in particular, namely, scores on standardized tests of academic content and English proficiency test scores. At the same time, my dissertation will analyze the different components of LFS and their relative importance when understanding the educational outcomes of SLIFE.

Chapter 3: Methodology.

3.1. Introduction.

This study fits into a postpositivist research framework because it was quantitative research that tested hypotheses with a large database and used regression as the main analytical technique. The basic research design was an ex post facto design that could be referred to as a "natural experiment." This study examined the educational outcomes and the incidence of limited formal schooling (LFS) among English learners (ELs) in Rainbow County, how personal risk factors and school-related protective factors affected the educational outcomes of ELs with LFS (known as "students with limited or interrupted formal education," or SLIFE), and the extent to which academic self-concept mediated or moderated the impact of personal risk factors and school-related protective factors.

3.2. Research Framework

The research framework of this study can be described as postpositivist (Creswell, 2002) since it was quantitative and aimed at understanding relationships between predetermined variables. Postpositivism is a paradigm associated with modern "scientific" research. It is an assumption about what knowledge is and how it can be gathered. To many readers, my work will appear "scientific" and "objective." However, unlike the positivist psychological research of the past, such as that of the behaviorists, postpositivist research, such as mine, does not claim to be able to perfectly establish objective truths. Postpositivist research understands that scientific research is fallible, and that reality is complicated, and tries to arrive at truth by

constantly refining the findings of previous studies. In my study, I built on previous studies of LFS that claim it puts a student "at risk" for educational failure (Brown, Miller, & Mitchell, 2006; Advocates for Children of New York, 2010; Bartlett, 2007; Walsh, 1999) to determine how that risk was either increased or decreased by the protective and risk factors identified in the literature on SLIFEs.

Postpositivist studies, like my own, begin with a hypothesis or theory about reality (Creswell, 2002). Postpositivists admit, however, that it is impossible to prove that their hypotheses are true, so instead they look for evidence that the opposite is extremely unlikely. For instance, I built on previous studies by proposing the hypothesis that, for high school ELs, arriving with LFS is significantly associated with lower scores on state-mandated standardized tests of academic achievement (referred to as "High School Assessments" or HSAs). The opposite, or null hypothesis, would be that there is no significant association between arriving with LFS and having lower scores on HSAs. In this case, data that show SLIFE consistently having lower scores on HSAs would show that the null hypothesis is extremely unlikely and support the hypothesis that arriving with LFS does in fact give ELs a disadvantage on those tests.

3.3. Research Approach

The preferred method for examining whether a causal relationship exists is an experimental study (Singleton & Straits, 2005), but out of necessity I have chosen an ex post facto or natural experiment instead. In an experimental study, a researcher can manipulate the independent variable and observe changes in the dependent variable, examining the relationship between the two variables under controlled

conditions (Shadish, Cook, & Campbell, 2002). More importantly, in a true experiment, there is random assignment of individuals to treatment or control conditions so the groups are likely to be similar on average and therefore the causal effect of the treatment is less likely to be due to differences between the individuals in the two conditions. This type of research was not feasible or ethical for answering the research questions in my study, however (Charles & Mertler, 2002). Ethically, one cannot randomly select two groups of children and deprive one group of its formal schooling in order to measure the effects of LFS with an experimental method. Moreover, the complex realities of education with its many interacting and confounded variables cannot be reproduced in a laboratory with a double blind study.

Ex post facto studies, or after-the-fact natural experiments, are suitable when treatment variables cannot be manipulated and data are gathered in retrospect to look for causes or extend previous research. These studies "are 'natural experiments' in that the 'treatment' or the effect of some variable occurs naturally, and the effect is observed either after the fact, or as it occurs" (Krathwohl, 1998, p. 587). The problem with this type of study is that we cannot be certain that the two groups are equivalent in terms of other characteristics that might be affecting the dependent variable as well. By employing multiple regression analysis and including many relevant control variables in my statistical models, I tried to neutralize any potential selection effect due to lack of random assignment.

3.4. Methods of Analysis.

Multiple regression is a statistical method that allows a researcher to mathematically hold the effects of intervening variables constant in order to account

for differences between groups and better estimate the strength and significance of associations between independent and dependent variables (Tabachnick & Fidell, 1996; Allison, 1999). For datasets such as mine with around 165 cases, this method is robust using as many as 14 variables[19] and can be performed using SPSS software on a typical computer. Whether using an experimental design or a non-experimental design, multiple regression analysis is superior to bivariate analysis[20] for estimating outcomes when there are several interrelated independent variables affecting one dependent variable, especially when spurious relationships[21] may exist (Agresti & Finlay, 2009).

Using multiple regression analysis allowed me to account for important covariates that affected the educational outcomes of ELs. Accounting for those variables gave me a better understanding of the actual effect of arriving with LFS and reduced the chances of arriving at spurious conclusions. For example, since SLIFE are more likely to come as refugees from strife and injustice in underdeveloped countries, they also are more likely to arrive with other problems that might interfere with future school learning such post-traumatic stress disorder, immigration issues, disrupted family support, low parental education, or discrimination at school (Advocates for Children of New York, 2010; Crandall, Bernache, & Prager, 1998;

[19] The number of variables allowed in the analysis depends on the number of cases. Green (1991) has suggested the formula $N \geq 50 + 8m$ in which N is the number of cases and m is the number of variables.

[20] A bivariate analysis is an analysis of one independent variable and one dependent variable without including control variables in the regression models.

[21] A spurious relationship is a false conclusion about an association. An example of this would be attributing increases in crime to increases in education because areas with more crime tend to have higher average levels of education per individual. Multiple regression analysis in such a study would allow us to discover that areas with higher education are also more likely to be more urban and that the real causal variable for crime is urbanization not education (This example is taken from Agresti & Finlay, 2009).

Freeman, Freeman, & Mercuri, 2002; Garcia, 1999; DeCapua, Smathers, & Tang, 2010; Ruiz-de-Velasco & Fix, 2000). My choice in methods, multiple regression analysis, helped me to determine whether the observed lower outcomes of SLIFE were due to their arriving with limited formal schooling instead of those other factors that might be associated with limited formal schooling.

3.5. Rationale for Methods.

I implemented a quantitative research design for practical reasons. I do not assert that quantitative research is superior to qualitative research in general. In fact, I used qualitative studies to identify the risk and protective factors used in this study (Crandall, Bernache, & Prager, 1998; Freeman, Freeman, & Mercuri, 2002; Garcia, 1999). Those qualitative studies also supported my research hypothesis that SLIFE can be resilient in overcoming the educational challenges that they face (Bigelow, 2007; Bartlett, 2007). However, my literature review showed a lack of quantitative studies that have empirically examined the findings of those qualitative studies. I believed it was important to have quantitative studies with public school data for people who value such studies. My experience in the public school system leads me to believe that the general public, school administrators, and educational policy makers are very persuaded by quantitative data. I felt that choosing a quantitative approach would increase the potential for the findings of my research to inform or support educational policies for their benefit.

3.6. Setting.

This study took place in a largely suburban, East Coast school district I refer to by the pseudonym "Rainbow County" because of its reputation for diversity and

integration (Rainbow County Public School System, 2012). According to state and local officials and my own experiences with those schools, Rainbow County schools have large foreign-born student populations, well-developed ESOL programs, and strong reputations for supporting all students for better educational outcomes (Maryland State Department of Education, 2013). In the 2011-12 school year, the Rainbow County school system had roughly 300 students classified as ELs. According to the county's ESOL program coordinator and achievement specialists, the two fastest growing groups at the time were the Koreans and the ethnic Chin people from Burma, but no particular ethnic group dominated the EL population (personal communications, 2011). They were proud to claim that students from low-income families were often enrolled in the same school as students from high income families. They also remarked that many of the immigrant families in the area had come to the area specifically because of its high-quality schools (U.S. News and World Report, 2013).

The students in my sample were enrolled in ten participating secondary schools,[22] although the sample was not equally balanced across schools (see Table 1). Some schools had fewer than ten students participating in the study while others had over 20. There was significant variability in most of the characteristics of participating schools, except for attendance and dropout rates. About half of the schools were majority white and the others were majority minority. Similarly, about half of the schools had more than 20% of their students receiving free and reduced meals, while others had 7% or fewer. Schools also differed in the percentage of

[22] The county has twelve schools total, but two of them have no ESOL program because they have three or fewer ESOL students and send their ELs to other schools for services.

students they sent to four-year colleges. One school, for example, sent 83% of their graduates to four-year colleges, while many others sent 61% or less. It is important to note that the school characteristics described above do not necessarily reflect the characteristics of their EL students and some ELs were actually bused in from other school districts that did not have the programs they required. A school with a high average income could have an EL population that was generally low income.

ELs in Rainbow County were eligible to receive comprehensive academic and English support through a well-developed ESOL program coordinated at the county level. Students with very low English proficiency (level 1) were eligible to enroll in a newcomer program (Short D. , 2002) instead of their regular school. This program was designed primarily for SLIFE and sequestered students from regular ninth grade curriculum in order to better prepare them for eventual grade-level coursework. It provided a greater number of ESOL courses and some basic math classes. For the other ELs, ten of the twelve county schools provided ESOL programs. Students not in those schools were eligible to enroll in those schools. The number of ESOL courses offered by each school differed depending on their staffing. Students were recommended for certain courses depending on their proficiency but could opt out of some or all. Most of the ESOL classes in the ten schools qualified as sheltered instruction (Echevarria & Graves, 1999) because they (a) were offered exclusively to ELs; (b) adhered to state and county curriculum and standards for grade-level content courses such as U.S. History, Health, American Government, or English Literature; (c) used a specific set of practices to make the content accessible and build students' English proficiency; and (d) were taught by teachers qualified in both ESOL and the

content area. Thus, students in these classes had the opportunity to learn grade-level content and English at the same time instead of being sequestered from grade-level coursework until they were proficient in English. This type of instruction is believed to be more effective for English learning (Echevarria, Vogt, & Short, 2008).

Table 1.

Participating Schools' Characteristics (Based On 2011-12 School Year Data)

	1	2	3	4	5	6	7	8	9	10
Number of students in this study	13	23	3	4	27	10	25	11	28	21
% Asian	9	25	31	16	7	24	11	7	9	13
% Black	20	12	7	17	39	7	27	42	36	29
% Hispanic	6	6	4	6	10	5	13	15	11	11
% White	56	52	53	56	36	60	44	30	37	39
% who eventually attend 4-year college	67	74	78	75	60	83	61	56	60	56
% free lunch	11	18	7	7	29	6	21	36	27	28
Median income in $10,000s	$70	$93	$93	$71	$71	$114	$112	$69	$73	$69
Median house price in $1,000	$209	$265	$265	$197	$197	$357	$332	$162	$185	$162
Number of ELs	20	47	21	8	35	45	30	39	48	52
Overall attendance rate (%)	95	95	95	95	91	95	95	94	95	95
Attendance for ELs (%)	95	92	95	---	94	95	95	95	95	94
Overall mobility (%) (moved in past year)	9	8	5	5	15	8	9	14	12	12
EL mobility (%)	90	36	38	18	50	95	45	40	30	34
Overall dropout rate (%)	3	3	3	3	3	3	3	3	3	3
EL dropout rate (%)	3	3	4	15	3	11	7	39	11	11

Note. Data included in this table (except for the information in the first row), reflect the characteristics of the schools that participated in this study, not the sample in this study.

Source: School data from Maryland State Department of Education (2013), with income and housing data taken from 2000 Census.

It is important to note that the setting for this study may not represent a typical educational setting for ELs in the U.S. Research shows that EL students are much more likely than other students to be placed in segregated and failing schools where they are not likely to receive the support they need to learn English (de Cohen & Clewell, 2007; Gandara, Rumberger, Maxwell-Jolly, & Callahan, 2003). Therefore, this study may not be showing outcomes that are typical across the U.S., but instead may be showing outcomes that are more ideal.

3.7. Sample.

The sample for this study includes all students classified as ELs in the county's high schools who signed informed assent forms and whose parents signed informed consent forms. As per state policy, students were classified as ELs on the basis of English proficiency tests that were given to them when they first arrived in the U.S. and enrolled in Rainbow County schools (Maryland State Department of Education, 2013). The placement test at the time was the Language Assessment Systems (LAS) links test (CTB/McGraw-Hill LLC, 2007). Students were classified as ELs if they scored below 5 (on a range from 1 to 6) on the test when they first arrived in the county and enrolled in a school. Of the nearly 300 ELs in the Rainbow County high schools, 199 consented to participate in my study. Of those 199, there were 165 cases for which I had all the key variables needed to conduct the analyses for this study.

Table 2.

Student Demographic Characteristics

	Sample size	mean or %	SD[23]	% missing
Length of residence (yrs., 0-7)	165	2.34	1.61	0.0%
Gender (male)	162	57.4%		2.0%
Race/ethnicity	165			0.0%
Asian		46.1%		
Black		9.7%		
Hispanic		29.7%		
Other		14.6%		
Parental education (yrs., 0-26)	160	11.71	5.48	3.0%
Elementary or lower (0-5)		15.6%		
Primary (6-8)		11.8%		
Secondary (9-11)		15.0%		
High school + (12-15)		27.5%		
College (16+)		30.0%		
Grade in high school (9-12)	162			1.8%
9th		36.4%		
10th		29.0%		
11th		19.8%		
12th		14.8%		
Age (in years, 14-21)	162	17.5	1.66	1.8%
Country/region of origin	165			0.0%
Africa (not incl. North Africa)		5.5%		
Burma/Myanmar		23.0%		
Central America & Caribbean		18.8%		
Central Asia, Mid East, & Russia		14.9%		
China		6.1%		
Korea		12.1%		
Mexico		7.3%		
Other Asian		4.9%		
Other Latin		7.9%		
English schooling	165	10.3%		0.0%

As Table 2 shows, the ELs in the sample had spent about two years in the U.S. on average. Most of the students were either in grade 9 or 10 and were around 17 years old, but some were in later grades and many were older than 19 years old. They were largely Asian (47%), but Hispanics were also common (30%). Asian students came from diverse backgrounds; many were Chin (an ethnic group from Burma with refugee status in the U.S.), Korean, and Chinese. Most Hispanic students came from

[23] The abbreviation "SD" used in this paper indicates the standard deviation of the mean.

Central America and Mexico. Parental education varied a great deal. About 30% of students in the sample had parents with college degrees, while over 15% had parents with fewer than six years of formal schooling. Important language diversity was also observed in the sample; twenty-three different home languages were represented. The most common language was Spanish (26%), followed by Chin[24] (21%), Korean (14%), Chinese (9%), and French (5%). About 10% of the students had received their previous schooling in English.

In addition, students were clustered in schools based on their demographic characteristics (see Table 3). Many of the schools were racial/ethnic, language, or socio-economic enclaves. For example, some schools had larger Asian populations, and others had larger Hispanic populations. Many of the Chin were in one school, and Koreans and Chinese tended to cluster in two particular schools. Likewise, students with low-educated parents came from certain schools, while students with college-educated parents came from others. In some schools, students were more likely to be enrolled in ESOL classes than they were in others.

It is important to note that this sample may differ from the EL population found in other school districts across the country. Other school districts, for example, might have larger numbers of Hispanics and fewer Asians. In particular, these extreme highs and lows in educational attainment for the parents of students in this study may surprise some readers. Other studies, however, show remarkably similar findings for the educational levels of immigrants entering the U.S. (Capps, et al.,

[24] The Chin people of Burma actually speak several different languages (Barron, et al., June 2007). In Burma much of the schooling was in Burmese, but the home language for many of the Chin in this study was Hakha Lai, the language of their state capitol. The translator chose to use that language for the student survey because many of the students had learned how to read in Hakha Lai while in refugee camp schools. Hakha Lai uses the Roman alphabet.

2005; Ji & Batalova, 2012). Immigrants in the U.S. are an extremely diverse population in a number of ways. I believe this is reflected in this study's sample.

Table 3

School Characteristics (for Schools with the Largest EL Populations)[25]

	2 n=30		5 n=29		7 n=26		9 n=32		Group diff.
	Mean	CI	Mean	CI	Mean	CI	Mean	CI	
ESOL classes 2011-12 (0-5)***	2.70 (0.70)	[2.39, 3.00]	1.74 (1.70)	[1.07, 2.41]	1.56 (1.26)	[1.04, 2.08]	2.25 (1.62)	[1.62, 2.88]	
Length of residence (years)***	1.54 (1.04)	[1.09, 1.99]	3.05 (1.89)	[2.31, 3.80]	2.26 (1.67)	[1.57, 2.95]	2.98 (1.27)	[2.49, 3.48]	
Race/ethnicity									
Asian***	0.57 (0.51)	[0.35, 0.78]	0.19 (0.40)	[0.03, 0.34]	0.32 (0.48)	[0.12, 0.52]	0.79 (0.42)	[0.62, 0.95]	9>5 10>5
Hispanic***	0.13 (0.34)	[-0.02, 0.28]	0.48 (0.51)	[0.28, 0.68]	0.44 (0.51)	[0.23, 0.65]	0.21 (0.42)	[0.05, 0.38]	
Black***	0.04 (0.21)	[-0.05, 0.13]	0.19 (0.40)	[0.03, 0.34]	0.04 (0.20)	[-0.04, 0.12]	0.00 (0.00)	[0.00, 0.00]	
Other***	0.26 (0.45)	[0.07, 0.46]	0.15 (0.36)	[0.00, 0.29]	0.20 (0.41)	[0.03, 0.37]	0.00 (0.00)	[0.00, 0.00]	
Parental education (yrs.)***	13.39 (2.55)	[12.3, 14.50]	12.63 (5.18)	[10.6, 14.68]	13.88 (6.18)	[11.3, 16.48]	7.82 (5.03)	[5.87, 9.77]	7>9
0-5**	0.00 (0.00)	[0.00, 0.00]	0.11 (0.32)	[-0.02, 0.24]	0.13 (0.34)	[-0.02, 0.27]	0.32 (0.48)	[0.14, 0.51]	
6-8	0.04 (0.21)	[-0.05, 0.13]	0.11 (0.32)	[-0.02, 0.24]	0.04 (0.20)	[-0.04, 0.13]	0.21 (0.42)	[0.05, 0.38]	
9-11	0.13 (0.34)	[-0.02, 0.28]	0.15 (0.36)	[0.00, 0.29]	0.13 (0.34)	[-0.02, 0.27]	0.32 (0.48)	[0.14, 0.51]	
12-15***	0.48 (0.51)	[0.26, 0.70]	0.26 (0.45)	[0.08, 0.44]	0.13 (0.34)	[-0.02, 0.27]	0.07 (0.26)	[-0.03, 0.17]	
16 + ***	0.35 (0.49)	[0.14, 0.56]	0.37 (0.49)	[0.18, 0.57]	0.58 (0.50)	[0.37, 0.80]	0.07 (0.26)	[-0.03, 0.17]	7>9
Grade in high school (9-12)***	9.70 (0.80)	[9.32, 10.08]	10.30 (1.20)	[9.82, 10.77]	10.60 (1.16)	[10.1, 11.08]	10.36 (1.03)	[9.96, 10.76]	
English previous schooling***	0.04 (0.21)	[-0.05, 0.13]	0.15 (0.36)	[0.00, 0.29]	0.12 (0.33)	[-0.02, 0.26]	0.00 (0.00)	[0.00, 0.00]	

[25] Standard deviations are listed in parentheses under means. Confidence intervals are in brackets. Variables for which significant differences existed are marked with * for $p \leq .05$, ** for $p \leq .01$, and *** for $p \leq .001$. Significant differences between specific schools, based on Scheffe post hoc analyses, are listed in the last column.

Region/country of origin									
Africa	0.04 (0.21)	[-0.05, 0.13]	0.07 (0.27)	[-0.03, 0.18]	0.04 (0.20)	[-0.04, 0.12]	0.00 (0.00)	[0.00, 0.00]	
Burma***	0.04 (0.21)	[-0.05, 0.13]	0.00 (0.00)	[0.00, 0.00]	0.12 (0.33)	[-0.02, 0.26]	0.75 (0.44)	[0.58, 0.92]	9>2 9>5 9>7
Central Asia, Mid. East, & Russia***	0.26 (0.45)	[0.07, 0.46]	0.15 (0.36)	[0.00, 0.29]	0.20 (0.41)	[0.03, 0.37]	0.00 (0.00)	[0.00, 0.00]	
Central America & Caribbean	0.09 (0.29)	[-0.04, 0.21]	0.26 (0.45)	[0.08, 0.44]	0.28 (0.46)	[0.09, 0.47]	0.14 (0.36)	[0.00, 0.28]	
China	0.17 (0.39)	[0.01, 0.34]	0.04 (0.19)	[-0.04, 0.11]	0.04 (0.20)	[-0.04, 0.12]	0.04 (0.19)	[-0.04, 0.11]	
Korea***	0.35 (0.49)	[0.14, 0.56]	0.11 (0.32)	[-0.02, 0.24]	0.08 (0.28)	[-0.03, 0.19]	0.00 (0.00)	[0.00, 0.00]	
Mexico	0.04 (0.21)	[-0.05, 0.13]	0.15 (0.36)	[0.00, 0.29]	0.04 (0.20)	[-0.04, 0.12]	0.07 (0.26)	[-0.03, 0.17]	
Other Asian	0.00 (0.00)	[0.00, 0.00]	0.04 (0.19)	[-0.04, 0.11]	0.08 (0.28)	[-0.03, 0.19]	0.00 (0.00)	[0.00, 0.00]	
Other Latin***	0.00 (0.00)	[0.00, 0.00]	0.19 (0.40)	[0.03, 0.34]	0.12 (0.33)	[-0.02, 0.26]	0.00 (0.00)	[0.00, 0.00]	

3.8. Procedures for Collecting Data.

3.8.1. Permission to Collect Data.

Before collecting data, I secured permission to conduct research from the public school system, specifically, permission to use their existing data and administer a survey to their students (see Appendix A: School System Permission on page 200), and from UMBCs Institutional Review Board (see Appendix B: Institutional Review Board Approval on page 201).

3.8.2. Informed Consent.

All participating students and parents of students signed informed assent or consent forms (see Appendix C: Assent and Consent Forms on page 201. The forms

were written at an appropriate reading level and translated into students' home languages, which included Spanish, Urdu, Korean, and Chinese (see Appendix D: Translated Assent and Consent Forms on page 204).[26] For participants and parents with low-literacy, teachers and translators read the forms and answered questions. Participating school staff members were told that they should at no point make parents and their children feel under pressure to consent. Parents and students were reassured that the survey would be confidential. Translators and other staff enlisted in the research were given instructions to avoid unethical conduct.

3.8.3. Collecting Data.

The data used in this study came from the school-district system's data and surveys administered to the participating students.

Obtaining the initial database. In Rainbow County, all high school ESOL program coordinators submit a list to the county with the names and identification numbers of all students currently classified as ELs. The list includes students' length of residence in the United States, initial English proficiency test scores (the LAS Links), ESOL program coursework, first languages, nations of origin, ages, genders, and grades. This was the first source of data for the study and was the foundation on which the study's database was created.

Inputting intake information. Other existing data that were not available through Rainbow County information systems were added from paper documents within students' "intake" files located in the school system's International Office

[26] Early in the school year, when we were acquiring parental and student assent, the county international office did not have a qualified Chin translator available, but a member of the Chin community agreed to explain it to people in Chin on request. Later, for the student survey we were finally able to locate a Chin translator willing and able to translate the survey into Hakha Lai the most common language used by the students.

where all newly-arrived international students must register for school. These "intake" files usually included the following data: the last year of schooling the student completed before coming to the U.S., the date on which the student was last in a classroom in his/her homeland before emigrating, the year the student was first enrolled in any U.S. school, any interruptions in the period in-between, transcripts brought from the student's homeland, the student's math placement test, and the results of the initial English proficiency test given during this intake process.

Creating a survey. A survey is a self-administered instrument that uses closed- or open-ended questions to gather information from participants in a systematic way (Fink, 2006; Groves, et al., 2004). The survey used in this study was developed on the basis of the literature review and well-known studies such as Add Health (University of North Carolina Population Center), Children of Immigrants Longitudinal Study (Portes & Rumbaut, 2007) and the Longitudinal Immigrant Student Adaptation study (NYU Steinhardt School of Culture, Education, and Human Development). In many cases, survey items and scales were borrowed from other studies in adapted form.[27] This increases the validity of my instruments since borrowed survey items and scales from previous studies have already been tested for reliability (Singleton & Straits, 2005). Borrowing survey items and scales is a practice that is considered ethical in the research profession as long as those questions are not copy written.

In order to ensure the validity of the survey, several bilingual/bicultural employees of the county's International Office and ESOL teachers volunteered to

[27]In a later section I will discuss specific questions/items that I borrowed and cite studies from which those items were borrowed or inspired.

examine the instrument acting as topic experts to help ensure that each item measured what it was intended to measure considering cultural differences and translation issues (Colton & Covert, 2007). The survey was proofread for meaning and clarity by translators and cross-cultural achievement liaisons. They examined and critiqued the instrument taking into account the different populations included in the study. Finally, the survey instrument was tested with several ELs of the targeted age to obtain their feedback and examine the level of difficulty and confusion so further improvements could be made (see Appendix E: Annotated Survey Instrument on page 208).

A major challenge of this study, however, was creating an instrument that would be appropriate for students from different countries and languages. One cannot expect all people to sit through a very long and complicated survey (Singleton & Straits, 2005), especially high school students with histories of interrupted schooling and low literacy. I knew that constructs, such as academic self-concept or parenting style, were usually measured with instruments with many items that would take respondents a long time to complete, but I had to reduce the number of items and create abbreviated and simplified versions or else risk exhaustion and increase the probability that some students would randomly choose answers without reading the survey items in order to finish faster (Singleton & Straits, 2005). In the interest of simplicity, nearly all items used a Likert-type scale for student responses. Students were asked to choose a number from one to four to indicate whether they "strongly disagree," "disagree," "agree," or "strongly disagree" with statements about themselves such as "I can talk to my teachers about problems in my life." In case of

exhaustion, I placed the items for the key independent variables, such as academic self-concept and pedagogical caring, in the front of the survey. I also wrote items at a low reading level, so they would be accessible to students of various educational levels. The survey was also translated into the students' first languages or languages of previous literacy experience (see Appendix F: Translated Survey Instruments on page 215).[28] The survey was designed to be administered to the students in groups in which they could either read quietly and choose their answers or have the survey read to them. The survey was designed to take fewer than thirty minutes to complete.

Administering a survey. The survey was administered during the regular school day in the spring of 2012. Beforehand, school staff had helped plan when, where, and how the survey would best be administered, which included identifying students who might need accommodations such as a translation of the instrument or oral administration. The administration of the survey roughly coincided with the administration of the state-mandated standardized tests known as High School Assessments (HSAs) and English as a second language progress tests known as the WIDA ACCESS. In most cases, I administered the surveys. In a few cases, ESOL teachers or translators administered the surveys after being carefully trained (i.e., they first observed me administering the survey and received written instructions).

Students could choose to complete the survey in English or in their first language (or whatever language they had the most literacy). Overall, only 33 of the 165 participants completed surveys written in their first language. Most of the

[28] The Chin students in this study spoke several languages, so the language used for the survey was not necessarily their home language. The translator used Hakha Lai, the language used in the capitol of the Chin state (Barron, et al., June 2007) and the language in which many students were schooled while in refugee camps.

students answered the survey in group sessions. High English proficiency students completed the surveys silently and independently. Low English proficiency students completed the surveys in groups while the content was read aloud to them. In three of the schools, there were many Spanish and Chin students with very low English proficiency who were separated into same-language groups which had translators read the survey to them in their first language.

During the administration of the survey, the administrators began by reading a standardized introductory explanation. They encouraged students to respond honestly, assured them that there were no right or wrong answers, and guaranteed confidentiality. The administrators utilized a LCD projector to complete three practice items to make sure students knew how to respond to the Likert-type items. Surveys were labeled with students' names and identification numbers, but the students removed the name labels when they received the surveys so they would not be identifiable.

Merging end-of-year educational outcomes data. At the end of 2012, the county provided the results from the students' HSAs and English progress testing. The test used to assess students' proficiency in English as a second language that Spring was the WIDA ACCESS test (WIDA Consortium: World Class Instructional Design and Assessment, 2007).

3.8.4. Final Sample and Missing Data.

Of the 199 students who agreed to participate in the study, 4 students had not taken the English proficiency test on arrival, and 6 more had not taken the 2012 English proficiency test because they had arrived after the testing date. Of the remaining 189 cases, 16 never completed the student survey, generally because they

left the school system before that survey was administered.

In addition, 8 students were accidentally given an incorrect version of the survey resulting in the invalidation of the two items in their survey data specifically relating to literacy in their language of previous formal schooling, a key variable in this study. All total, 34 (17.1%) lacked data for at least one of the key variables, leaving 165 (82.9%) cases that could be used for the study.

Of those 165 cases that were used in this study, 19 (11.5%) had missing data for at least one variable, leaving 146 (88.5%) cases with no missing data. Of the 19 cases with missing data, 7 (4%) were missing more than one item. In some cases, the missing data were due to students declining to answer specific survey items. For example, 3 students declined to answer the survey item in which they were asked to report how many hours a week they worked at a job, and 5 declined to give an estimation of their most educated parents' levels of education. Lastly, there were missing data at the county level for 3 cases on grade, age, and gender.

It is important to mention that analysis with 2011-2012 English gain and HSA scores were conducted with a sub-sample of the 165 students. In 38 cases (23%) students had not taken the 2011 English proficiency test because they had arrived after that test was administered. For those cases, it was not possible to estimate progress in English in the 2011-2012 school year. For HSA scores, only 51 (31%) of the 165 took Algebra 1 exam HSA, only 20 (12%) took the Biology HSA, and 47 (28%) took the English Language Arts HSA. For this reason, a composite of these exam scores was created to increase the sample size for the test scores analyses; this strategy will be discussed in more detail later.

3.9. Variables.

This study included a large number of variables. All educational outcome and control variables were obtained from the school system. Independent and moderator/mediator variables came from student surveys. The survey instrument is included in Appendix E on page 208.

3.9.1. Dependent Variables: English Language Acquisition and High School Assessment (HSA) Scores.

The dependent variables in this study were educational outcomes measured in the spring of 2012.

English language acquisition. Students in this study had been classified as ELs on the basis of their scores on a federally-mandated test of English proficiency (Maryland State Department of Education, 2013). At the end of every year they were required to take the test again to measure their progress. When ELs scored five or higher they were no longer classified as ELs. The English proficiency test used in the years prior to 2012 was the LAS Links (CTB/McGraw-Hill LLC, 2007). The LAS Links test is a standardized assessment of academic and social English proficiency with six bands: "low beginner," "high beginner," "low intermediate," "high intermediate," "advanced," and "native-like." A score of 6 never appears in my data since students would no longer have been considered ELs if they had previously earned scores of six.

In 2012, the state began using the WIDA ACCESS test instead of the LAS Links (Maryland State Department of Education, 2013). Although this test is somewhat different from the LAS Links, it uses the same metrics (i.e. six proficiency bands that roughly correspond to the same six levels of proficiency as the LAS Links'

bands (Kenyon, 2006). As with the LAS, the state considers students with scores of lower than five on the end-of-year test to be ELs.

This study examines English language acquisition in two ways:

1. *English proficiency 2012* was a measure of English proficiency based on 2012 WIDA test scores. It was a measure of achievement (with scores from 1 to 6) but not progress because it did not take into account students' initial proficiency. On average, participating students were in the fourth band of proficiency at the end of the 2012 school year (mean = 4.34; SD = 1.11) (see Table 4). The distribution of this variable was approximately symmetric as evident by its skewness of -0.15 and kurtosis of 1.02 (Bulmer, 2001). That means that the data fit a standard bell curve; it was evenly distributed around the mean; the curve was not too steep or too low, and there were no problematic outliers. Having a normally distributed variable is important for a study such as mine that uses regression analysis since that method assumes that the dependent variable is normally distributed.
2. *English gains 2011-12* measured progress because it took students' initial proficiency into account. It was calculated by subtracting the 2011 test score from the 2012 test score. On average, students increased by 1.22 points (SD = 0.73; see Table 4). The skew of 0.19 and kurtosis of 0.29 indicated normal distribution of scores.

Table 4.
Students' Educational Outcomes: Descriptive Statistics

	n =	mean or %	SD
English proficiency 2012 (1-6)	165	4.34	1.11
English gains 2011-12	127[29]	1.22	0.73
HSA scores (in standard deviations)	118[30]	0.00	0.99

Academic achievement. 2012 state-mandated High School Assessment (HSA) scores were used as dependent variables to measure academic achievement. These tests were graduation requirements and indicated whether students had met state standards (Maryland State Department of Education, 2013). The tests were criterion-referenced, meaning that their scores indicated the degree to which students had mastered the content-subject matter of the test, which was based on objectives in the state curriculum. The scores ranged from 240 to 650 with scores around 400 or higher considered as passing or "meeting state standards" (the passing threshold differed slightly from test to test).

There were three different HSA tests: Algebra, Biology, and English Language Arts. Generally, students took the algebra test in 9th grade, the biology test in 10th grade, and the English language arts test in 10th grade, but newly-arrived ELs often did not follow this order. If a student was not enrolled in the respective course, then she/he did not take the test. ELs who had passed those subjects in their homeland before coming to the U.S. were exempt from those standardized test requirements.

[29] This sample is smaller because of students who did not have the required 2011 end-of-year test as they had arrived after that test had been administered.
[30] This sample is smaller because some of the students were not taking any HSA tested course in 2012.

Therefore, students in this study were not taking the same HSAs during the study, and some did not take any. After combining the EL students who took any of the HSA tests, I only had data for 118 students. For this reason, analyses with HSA scores as a dependent variable used a restricted subsample of students who took the test in 2012.

Because students were taking three different tests, and there was no evidence that each test had similar levels of difficulty for ELs, I created standardized scores (scores that could theoretically be compared across tests) by converting each score into a new score based on its standard deviation within the sample of ELs who took the same test. By combining all the available test scores into one new variable, I was able to estimate analyses with a larger sample size (n = 118) than if I had utilized the available test scores separately.

Some may argue that each of these three tests represent very different challenges for ELs and therefore cannot reasonably be standardized and merged into one variable. Unfortunately, I cannot check the correlation between these three tests as students who took one test did not take the others. However, many researchers argue that performance on such tests largely depends on English proficiency, even when the tests intend to only test math (Sierci, 2005; Duran, 2008; Martiniello, 2008). Consequently, all three HSAs in this study were significantly correlated with students' English proficiency at the time of the test (Algebra HSA $r = 0.37$ with a $p = 0.01$; Biology HSA $r = 0.49$ with a $p = 0.03$; English HSA $r = 0.68$ with a $p = 0.00$).

Because *HSA scores* was a standardized variable, the mean was 0.00 with a standard deviation of 0.99. Scores in standard deviation units represent the deviation

of a given score from the average sample score. It is important to note that this variable had a skewness of -1.09 and a kurtosis of 2.09 indicating that it did not have a normal distribution. This was largely due to several algebra test-takers who had earned the absolute minimum score and therefore were pulling the distribution to the left. After estimating models with two different samples (with and without those outliers), similar patterns of results were observed. The results were not distorted by including the outliers so outliers were included in final estimates.

Bivariate correlations between the educational outcomes. *English proficiency 2012* had a significant positive correlation with *HSA scores* ($r = 0.57$), while *English gains 2011-12* had a correlation with HSA scores that was weak and only marginally significant ($r = 0.17$ with a $p \leq 0.10$). But, *English proficiency 2012* did not have a significant correlation with *English gains 2011-12* ($r = 0.13$). These correlations indicated that students with higher English proficiency were not learning English faster on the average but often had higher end achievement because they had arrived with higher initial proficiency.

3.9.2. Key Independent Variables: LFS-Related Variables.

The term LFS refers to limited formal schooling on arrival. It is a measure of the schooling a student had before arriving in the U.S. To operationalize LFS, I followed previous research which argued that the term "limited formal schooling" should refer to both missing years of schooling and lower educational outcomes such as literacy and math skills (Mace-Matluck, Alexander-Kasparik, & Queen, 1998; Advocates for Children of New York, 2010).

Therefore, in this study, LFS was operationalized using three indicators intended to measure the adequacy of students' previous formal schooling when they first arrived in the U.S.: (1) *schooling gap*, (2) *low L1 literacy*, and (3) *beginner English*. These are commonly used indicators of LFS by other researchers and policy makers (Mace-Matluck, Alexander-Kasparik, & Queen, 1998; Advocates for Children of New York, 2010; New York State Department of Education, 2011). My operationalization of LFS differed from that of the New York State Department of Education (2011), however, which requires that students arrive missing two or more years of schooling to be classified as having LFS. Moreover, I have chosen to measure LFS with multiple indicators because research shows that the information immigrant families provide school systems on their children's previous school attendance is sometimes unreliable and therefore should not be the main standard (Advocates for Children of New York, 2010). Immigrant students and their families are often afraid to admit they experienced interruptions in their schooling. Furthermore, students who have consistently attended school may still have limited formal schooling if the schools they attended had very limited hours or did not have adequate teachers or resources (Mace-Matluck, Alexander-Kasparik, & Queen, 1998).

Some may argue that I should not have included low English proficiency as an indicator of LFS as arriving with low English proficiency is not necessarily indicative of LFS. But, in countries in which English as a second or foreign language is a subject taught in school, one could argue that more educated people would likely have more mastery of English and vice versa. This would be even more true in countries where English is often the medium of instruction (e.g. Nigeria). Moreover,

the literature describes ELs with LFS (SLIFE) as having low English proficiency, and I intended to create a measure consistent with the literature. I had hoped to also use math placement tests as a measure of the quality of students' previous formal schooling, but these tests had been administered inconsistently, and therefore, had too much missing data to be useful.

Schooling gap was a dichotomous, or "dummy" variable, that identified students who were missing at least one year of *grade-relative schooling* (explained below) on arrival in the U.S. Students with *grade-relative schooling* scores of -1 or lower were identified as having a *schooling gap* and given a score of one regardless of whether they had missed one year or four. Other students were given a score of zero to indicate that they had no missing years of schooling in their schooling history (or had extra years of *grade-relative schooling*). In this manner, this variable became a dichotomous indicator of LFS.

To define the *schooling gap* variable, I first created a *grade-relative schooling* variable by subtracting the grade students were placed in on arrival in the U.S. from the grade following the last grade they had completed in their homeland.[31] Thus, students who had completed 6th grade in their homeland who had been placed in 7th upon arrival in the U.S. would have a *grade-relative schooling* value of zero because

[31] As per state policy, when students arrived from another country and were of middle school age (i.e. below age 15), they were generally placed in a grade according to their age regardless of their previous schooling. Students of high school age, however, were placed in a grade based on the credits they had brought with them from their homeland schooling. But, each grade in high school required one English credit from homeland schooling, and those credits were honored only when the student had English proficiency demonstrated on an English placement test. In this manner, a student who had finished 6th grade could be placed in 9th grade upon enrollment in a U.S. school based on his/her age. In the same manner, a student who had completed 11th grade could be placed in 9th grade if he had arrived with low English proficiency. This grade-placement policy is relatively standard across the U.S. as per the guidance of the U.S. Department of Education (Miami-Dade County Public Schools, 2012; Armendariz, 2013; Advocates for Children, 2008).

there was no difference between the expected and actual grade placement. Students who had completed 6th grade but had been placed in 9th would have a score of negative two because they had a two-year gap in their years of schooling. Students who had completed 10th grade but were placed in 9th would have a score of positive two showing that they had two extra years of schooling relative to other students in their grade, but these positive scores did not factor into the calculation of their *schooling gap* score.

It is important to note that a score of one indicating a *schooling gap* did not always indicate an interruption in schooling. In other words, it was possible for students to have not attended school for two years, but not have a schooling gap if the grade they were enrolled in on arrival matched the expected grade considering the last grade they completed. A student who finished 8th grade in his or her homeland, worked for four years, and then came to the U.S. and enrolled in 9th grade would have had a score of zero for *schooling gap* despite the four-year interruption in the contiguity of their attendance.[32] The *schooling gap* variable showed whether a student enrolled with the previous formal schooling, measured in years, to be prepared for 9th grade, but did not acknowledge the time spent out of school during an interruption as long as the student had completed the expected years of schooling for his or her grade. Admittedly, students who experienced long interruptions may have lost some of their learning, and this was not accounted for in cases when the interruptions did not involve gaps in grade-relative schooling.

[32] This is important to clarify because some people use the term "interruption" to refer to a period of non-attendance (Somerset County Public Schools, 2013).

Low L1 literacy. This variable was based on students' self-reported literacy levels in their language of homeland schooling. In most cases, the language of homeland schooling was the same as the student's "home" language, but some students had previously attended schools in which the language of instruction was not their home language. In many nations, the language used in school is a language of their colonial history, such as English or French.[33]

To measure L1 literacy, I used two survey items based on the Children of Immigrants Longitudinal Study (Portes & Rumbaut, 2007): "When I first arrived in the U.S., I could [read/write] as well in [language of schooling] as most American kids my age could [read/write] in English." Responses included: 1 "strongly disagree," 2 "disagree," 3 "agree," and 4 "strongly agree." An overall score was obtained by averaging responses to these two items. This score was then transformed into a dummy variable. If students reported scores an overall score of 2.5 or lower, then they were defined as having *low L1 literacy*. A score of zero in *low L1 literacy* indicated that students had adequate L1 literacy on arrival. In this manner, this variable became an indicator of risk with 1 indicating lower literacy and supposedly more LFS.

Beginner English was created using the scores from the LAS Links English proficiency placement test students took when they first arrived in the U.S. and enrolled in a Rainbow County School (see page 99 for a detailed description of this assessment). Although the test had a range of one through six, scores of six were not observed in this sample since a student with such a score would not have been

[33] For example, 37 students in this study (22.4% of the cases) had received their previous schooling in English, although they spoke different languages at home (e.g., Hindi, Nepalese, and Arabic).

classified as an EL. Higher scores indicated more English proficiency and supposedly also indicated more adequate previous formal schooling.

Students were classified as having arrived with *beginner English* (a score of 1) if they scored below three on the English proficiency test given on arrival. A score of one indicated beginner English proficiency on arrival and a score of zero indicated that students arrived with at least intermediate level English skills.

Combining the LFS Indicators. In this study, I operationalized limited formal schooling (LFS) combining the three aforementioned indicators: (1) *schooling gap*, (2) *low L1 literacy*, and (3) *beginner English*. The *LFS* variable was an ordinal variable with a range from zero to three that showed how many of the LFS indicators each student had. It is important to note that this variable had a Cronbach's alpha of 0.21 indicating a lack of reliability for use as a scale in this type of research (George & Mallery, 2003; Kline, 1993). A further examination revealed that this was due to the fact that *low L1 literacy* shared no significant positive correlations with the other two variables (see Table 5). If these three LFS indicators were actually components of one concept then they should have be correlated. I will discuss this issue in the findings section and the rationale of why I decided to still examine this indicator as an overall composite.

Table 5.

Correlations between LFS Indicators[34]

	Schooling gap	Low L1 literacy	Beginner English
Schooling gap			
Low L1 literacy	0.02		
Beginner English	0.29***	-0.08	

[34] Data shown are Pearson coefficients. Statistically significant correlations are marked with * for p = .05 and lower, ** for .01 and lower, and *** for .001 and lower.

The LFS variable was then transformed into the dummy variable, *SLIFE*, to identify "students with limited or interrupted formal schooling" for a special subgroup in this study. Students obtained a score of 1 on *SLIFE* dummy variable if they had at least two of the three LFS indicators: (1) *schooling gap*, (2) *low L1 literacy*, and (3) *beginner English*.

3.9.3. Moderating/Mediating Variable: Academic Self-Concept.

The moderating/mediating variable in this study, *academic self-concept*, was measured by a scale consisting of 12 survey items. Each item asked students to indicate agreement to statements related to academic self-concept, such as "My grades are very important to me" or "I can have a better life if I improve my English." Like most other items in the student survey, these items used Likert-type responses. Response choices included: 1 "strongly disagree," 2 "disagree," 3 "agree," and 4 "strongly agree."

The items were based largely on items found in the Assessment of Academic Self-Concept and Motivation (Gordon Rouse & Cashin, 2000), as well as the How I See Myself Scale (Gordon, 1966). Whereas the aforementioned scales of academic self-concept are much longer (about 80 items), I created a shorter scale to avoid having students become impatient and stop cooperating because of the overall length of the survey (O'Leary, 2007; Singleton & Straits, 2005). Unlike Gordon Rouse & Cashin's scale (2000), my scale only measured four dimensions: goal orientation, beliefs about one's own academic abilities, locus of control in academic contexts, and

the personal value of educational outcomes for one's future.[35] In the scale utilized in this study, I used three items to measure each of the four dimensions.

To create an overall score for the academic self-concept variable, I averaged the scores from all twelve items. Higher scores on this measure signify stronger academic self-concepts. The scale was moderately reliable (Cronbach's alpha[36] of 0.66). On the average, students in this sample had positive academic self-concepts since scores of three and higher indicated positive responses (mean = 3.37 and SD = 0.31).

3.9.4. Protective Factors.

This study examined five protective factors that might help students achieve better than expected educational outcomes. Three of the five protective factors were measured utilizing Likert-type responses in which students were asked whether they 1. "strongly disagree," 2. "disagree," 3. "agree," or 4. "strongly agree." The other two variables, *ESOL classes 2011-12* and *extra curricular activities* were measured differently as explained in the following pages.

Pedagogical caring measured students' perceptions of how much their teachers cared for them using a seven-item scale. To create this measure I followed Wentzel's (1997) coding system and Johnson et al's (1985) Teacher Social and Academic Support subscales of the Classroom Life Measure. Each item measured one of seven aspects of perceived pedagogical caring regarding whether their teachers

[35] Academic self-concept did not include dimensions such as the extracurricular, social, and personal dimensions included in Gordon Rouse & Cashin's scale, as those dimensions were included separately in other survey items and scales.

[36] Cronbach's alpha is sensitive to the size of the scale. Given that self-concept scale is smaller than most used in research, it is less likely to show a high Cronbach's alpha (George & Mallery, 2003; Kline, 1993).

1) cared about them in general, 2) cared about teaching and learning, 3) had equitable interactions, 4) cared about them as individuals, 5) cared about them as learners, 6) believed in their abilities, and 7) supported them academically. Scores were averaged to create an overall score; higher scores signified more perceived pedagogical caring. The Cronbach's alpha for this scale was 0.76 indicating reliability. The data had a mean of 3.14 and a standard deviation of 0.43 indicating that students, on the average, believed their teachers typically cared about them (see Table 6).

Table 6.

Descriptive Statistics: Protective Factors

	n =	mean	SD	% missing
Pedagogical caring (1-4)	165	3.14	.43	0.0%
Social integration (1-4)	164	2.66	.64	0.6%
# of ESOL classes 2011-12 (0-5)	165	2.15	1.49	0.0%
# of extra-curricular activities (0-4)	164	1.41	1.20	0.6%
Out-of-school help (1-4)	164	2.59	.98	0.6%

Note. Higher values indicate greater protection.

Social integration measured students' perceptions of how well they were socially integrated into their school environments using five-items. Students responded to statements such as "In my school, American students are interested in learning more about me," or "In my school, American students want to talk to me." To calculate the overall score, two items were reverse-coded before averaging. Higher scores signified greater perceived social integration. The Cronbach's alpha was 0.61, somewhat lower than optimal. On average, students reported neither positive or negative social integration (mean = 2.66 and SD = 0.64) (see Table 6).

Number of ESOL classes 2011-12 indicated how many ESOL classes students took during the 2011-12 school year. On average, students took two ESOL classes during this academic year (mean = 2.15 and SD = 1.45) (see Table 6).

Number of extra-curricular activities. Students reported whether they were currently participating in any clubs or teams or had attended any school dances or games. Students were given one point for each extra-curricular activity they participated in to create one variable with a range of between zero and four. Students, on average, reported having participated in one extra-curricular activity (mean = 1.41 and SD = 1.20) (see Table 6).

Out-of-school help. This variable used a single item to measure how much help the students received with their schoolwork from people outside of school. Higher scores indicated that students received more help. This variable had a mean of 2.59 (SD = 0.98) indicating that about half of the sample disagreed that they had received help outside of school, but such help was not uncommon (see Table 6).

3.9.5. Risk Factors.

This study used six variables that, based on the literature review, were presumed to be risk factors that might lead to lower than expected educational outcomes for ELs. Five out of six variables were measured utilizing Likert-type responses: 1. "strongly disagree," 2. "disagree," 3. "agree," or 4. "strongly agree." *Hours of work in employment* was measured differently as explained in the following pages.

Traumatic experiences. Three items measured experiences that may be related to post-traumatic stress disorder (PTSD). Following Sankey (2010), I selected

three items from the revised version of the Trauma Assessment for Adults (Resnick, Falsetti, Kilpatrick, & Freedy, 1996) to focus on specific types of traumatic experiences: witnessing harm done to others, fearing that harm would be done to oneself, and having harm done to oneself.

The scores for the items were averaged to make an overall score with a range from one to four in which a higher score indicated more traumatic experiences. The Cronbach's alpha of this scale was 0.64, which indicated good reliability considering that it only had 3 items. Students, on average, reported having had few traumatic experiences (mean = 2.07 and SD = 0.77) (see Table 7). About 40% of students reported seeing people hurt or killed in such traumatic events; 43% reported being very afraid during such events; and 20% reported having been themselves hurt during such events.

Separations from caretakers. Based on Wright's dissertation (2010), students were asked to show agreement with two statements: 1) "I was separated from one or more of my parents for over six months," and 2) "When I moved to this area, I left behind people who took care of me." Responses were averaged to create an overall score in which higher scores indicated more profound experiences with separation from caretakers. The mean for this variable was 2.45 with a standard deviation of 1.04, indicating that such separations were neither common nor uncommon (see Table 7) with 40% of all the students reporting separations from parents and 62% reporting separations from non-parental caretakers.

Table 7.

Descriptive Statistics: Risk Factors

	n =	mean	SD[37]	% missing
Traumatic experiences (1-4)	164	2.07	0.77	0.6%
Separations from caretakers (1-4)	164	2.45	1.04	0.6%
Social distance (1-4)	165	2.33	0.58	0.0%
Negative peers (1-4)	165	1.94	0.49	0.0%
A lack of authoritative parenting (1-4)	164	1.74	0.51	0.6%
Hours spent working (0-48)	162	6.23	10.28	1.8%

Note. Higher values indicate greater risk.

Social distance. Following Schumann (1976) and Portes and Bach (1985), I measured social distance with three items indicating whether students (1) did not expect to stay in the country for a very long time, (2) believed that the dominant group felt superior to them, and (3) believed the dominant group's culture was inferior. The three items were averaged to create an overall score with higher scores indicating perceptions of greater social distance. The mean of 2.33 and standard deviation of 0.58 showed that students, on average, had neutral feelings of social distance between themselves and "Americans" (see Table 7), with 14% reporting that they expected to stay in the U.S. for a short time, 49% reporting that they believed "Americans" think they are better than immigrants, and 32% reporting that they felt their homelands' ways of life were better than the "American" way of life.

Negative peers. Following the work of Ainsworth-Darnell & Downey (1998) and Rumberger (1995), I used eight items to measure whether students' peers were non-educationally oriented or "oppositional" to educational authority. The students were asked to respond to statements such as "My friends believe that education is important." Some items were reverse coded and the scores were averaged creating a

[37] In this dissertation, the abbreviation SD is used for standard deviation.

variable with greater scores indicating peers with less academic orientation. This scale's Cronbach's alpha was 0.76, indicating that it had acceptable reliability (George & Mallery, 2003; Kline, 1993). The mean of 1.94 and standard deviation of 0.49 showed that students reported few negative peer influences on their education (see Table 7).

A lack of authoritative parenting. Nine of the survey items measured the extent to which students were supervised by adults who practiced authoritative parenting. These items were based on Baumrind's (1966) and Dornbusch, Ritter, Leiderman, Roberts, & Fralieghm's (1987) research as well as the Parenting Styles and Dimensions Questionnaire developed by Perlmutter, Tauliatos, and Holden (1995). Students responded to statements such as "My parents help me be a good student" by showing agreement on a Likert-type scale. Some items were reverse coded and then averaged to create an overall score with higher scores representing less authoritative adult supervision and support for education. Preliminary analyses of this scale showed good reliability (Cronbach's alpha of 0.83). The mean of 1.74 and standard deviation of 0.51 showed that students, on the average, reported having parents whose parenting was supportive of their education (see Table 7).

Hours spent working. Following research by Steinberg & Dornbush (1991), I used one open-ended question that gathered the number of hours students worked in employment during a typical week. The mean of 6.23 and standard deviation of 10.28 showed that students, on average, reported working over six hours a week in paid employment (see Table 7), but they varied a great deal. About 60% of the students did not work at all; 20% worked as many as 10 hours a week; nearly 14%

worked between 10 and 20 hours a week; and 10% worked over 20 hours a week, with six of the students working as many as 40 or more.

3.9.6. Control Variables.

The following variables were included as controls in some of the statistical models.

Length of residence. This variable is intended to indicate the number of years students had lived in the U.S. It was measured by subtracting the date in which students enrolled in a Rainbow County school from the date of the survey administration (Spring 2012). This information was obtained from intake documents produced at the time of the first enrollment in a Rainbow County school. On average, students had lived in the U.S. for 2.34 years (SD = 1.59).

In 24 cases, students had previously been enrolled in a U.S. school outside of Rainbow County, in which cases their length of residence in Rainbow County would not actually have been the same as their length of residence in the U.S. In 11 of those cases (6.7%), they had spent two years or more elsewhere, and in two of those cases they had spent three and four years elsewhere. For those cases, I was forced to use their date of entry in Rainbow County as their starting point because other counties or states had not always collected the data my study needed, had administered different tests and/or surveys, or had not shared the data with Rainbow County.

Parental education was measured by two open-ended questions on the survey asking for the number or years of education their fathers and mothers had. Students discussed the choices with the person administering the survey who offered numbers that would relate to levels of education such as 12 for a high school diploma,

or 16 for completing a four-year university education. Since there were two questions, one about the father and one about the mother, I used the one signifying the highest educational attainment. The average years of parental education was 11.71 (SD = 5.48, median = 12). Eight students in this study had parents with no formal schooling, and nearly 16% of the students had parents with 5th grade schooling or lower.

Overall, the educational levels for the parents of the students in this study were very diverse. Although the educational levels for some of the students' parents in this study might seem quite high for some and low for others, national data on immigrants show similar trends. Over 30% of all immigrant adults entering the U.S. have at least four years of college (Ji & Batalova, 2012), but 15% have less than a 9th grade education (Capps, et al., 2005).

Grade. Based on school system information, students were enrolled in 9th, 10th, 11th, or 12th grade. Overall, 36% of participants were in 9th grade, 29% in 10th, 20% in 11th, and 18% in 12th.

Age. This variable, measured in years, showed that, on average, students were 17.5 years old (SD = 1.65, range = 14 to 21). 9th graders were nearly 17 years old on average and 10th graders were over 17 on average. 11th graders were nearly 18 years old on average and 12th graders were over 19 years old. These data showed it was common for students to be overage for their grade.

3.10. Analytical Strategies.

In the early stage of analysis, I screened the data for factors that might distort correlations and lead to false conclusions (Tabachnick & Fidell, 1996; Allison, 1999).

First, I looked for patterns in individual student's data that could suggest they were incorrect and sought out correct data. Next, I checked to see whether the data fit the assumptions of multiple regression analysis and considered transforming variables in cases when they did not. Scales were checked for reliability and dummy variables were formed out of categorical variables. Finally, I chose a strategy to deal with the missing data.

3.10.1. Forming and Screening Variables.

Dependent variables. I screened dependent variables to ensure they fit the assumptions of multiple regression analysis. During this screening, I discovered some issues. For example, the algebra HSA scores showed unacceptable kurtosis because two cases had the absolute minimum score of 240. This caused the *HSA* variable (the standardized composite of all HSA scores) to have the same distribution issues. During the screening process, I ran bivariate analyses with this variable as-is and with this variable without the two outliers and found the outliers had not led to any significant difference in the findings. For this reason, I decided to use this variable as-is, including the two outliers.

Independent variables. During this study, I wrestled extensively with how to best operationalize the LFS indicators and the LFS composite variable. I experimented with alternative ways of operationalizing the LFS variable by utilizing different levels of intensity for each indicator. For example, I made a version of *low L1 literacy* that was for scores of two or lower that I called *very low L1 literacy*. Similarly, I made a version of *grade-relative schooling* for schooling gaps of two years or more that I called *two-year schooling gap* and another version of *English proficiency on arrival* called *low-beginner English* for students with scores of one on

the placement test. These different variables allowed me to examine how the intensity affected the relationships between each indicator and the educational outcomes. Some results were particularly informative and will be shared in the findings section.

I also experimented with alternative operationalizations of the LFS composite variable. In one operationalization, for example, I standardized the LFS indicators before averaging them. This strategy gave the less frequent indicators, such as low L1 literacy, equal weight with the more frequent indicators, such as beginner English. In another operationalization, I experimented with assigning each point of LFS only when the indicator variable was at least a full standard deviation lower. This created a more intense measure of limited formal schooling (e.g. including very low L1 literacy as opposed to just low L1 literacy). Similar to the other method, it gave each variable equal importance regardless of its frequency because it was based on a method of data standardization. Even though these two operationalizations identified students with higher levels of each LFS indicator, and therefore more risk, the findings were similar in bivariate analyses, so I eventually settled on the most parsimonious and commonly agreed upon operationalization to be the one used in this study. The result is that school districts should be able to reproduce my method of identifying SLIFE.

3.10.2. Conducting Analyses for the Findings.

Preliminary analyses included checks for colinearity (e.g. correlations between variables) and significant differences between groups. I estimated correlations between variables and mean differences between students based on schools, age, grade, and length of residence. All four groupings showed large and

significant differences and significant correlations with the educational outcomes and other variables.

As indicated on Table 8, age was correlated with grade and English proficiency in 2012; grade was correlated with age, length of residence, and English proficiency; and length of residence was correlated with HSA scores. One very important phenomenon discovered in these preliminary analyses was a very strong relationship between English proficiency in 2012 and 2012 HSA scores (an unstandardized coefficient of 0.52 with a standardized coefficient of 0.57 and a $p \leq 0.00$). Students with lower English proficiency in 2012 had lower HSA scores. English proficiency appeared to be a major barrier to academic achievement measured on standardized tests. This should not be surprising since tests were given only in English and this has been shown to be a major issue for ELs, even on math assessments (Duran, 2008; Martiniello, 2008). I determined that *English proficiency 2012* needed to be included as a control variable in multiple regression analyses involving *HSA scores*.

Table 8.

Correlations between Student Demographics and Educational Outcomes

	Age	Grade	Length of residence	English proficiency 2012	2012 HSA scores
Age					
Grade	0.54**				
Length of residence	0.01	0.32**			
English proficiency 2012	-0.18*	0.30**	0.11		
2012 HSA scores[38]	-0.13	-0.01	-0.29**	0.57	

Note. Significant correlations indicated by * for $p \leq .05$, ** for $p \leq .01$, *** for $p \leq .001$

[38] HSA scores here is a composite variable combining several tests and is explained on page 98.

The most interesting phenomenon involved length of residence. Students with longer lengths of residence often had lower educational outcomes instead of higher ones despite having had more time to learn English and close achievement gaps. (See the findings section page 142 for specific details). There were also similar findings for two other variables strongly related to *length of residence*: *age* and *grade*.

Based on my analyses, I developed a theory to explain the unexpected findings on the *length of residence* variable. *Length of residence* refers to the number of years that have passed since the student arrived from another country and enrolled in a Rainbow County Public School, but this variable could also be referred to as "length of time classified as an EL," since other students who entered the system at the same time might have already tested proficient in English and would not be in the sample of the current study. In other words, students with longer lengths of residence were taking longer to reach proficiency than their peers and accumulating in the rolls of students classified as ELs. I will henceforth call this the "accumulation effect."

Preliminary analyses also found major differences between students by schools and country of origin, but I determined not to consider those factors as it was beyond the scope of this study.

Dealing with missing data. This study employed no methods to fill in missing data such as using variable means or multiple imputation. Analyses excluded cases with missing data when those data were variables in the analyses (i.e. pairwise deletion). Cases with missing key independent variables (LFS indicators) were excluded from the study completely.

Primary analyses. I employed measures of central tendencies and regression analyses to answer the research questions of this study.

Question #1: How prevalent was LFS on arrival among high school students classified as EL in Rainbow County? To answer this question, I conducted descriptive analyses to determine the frequency of the three LFS indicators, the variables used to create those indicators, and the *SLIFE* dummy variable used to identify ELs with LFS. Finally, I examined bivariate correlations to determine the reliability of a scale that combines the three LFS indicators.

Question #2: Were school-related protective factors and personal risk factors more or less prevalent for SLIFE than for the other students classified as EL in Rainbow County? To answer this question, I estimated means, standard deviations, and frequencies separately for the entire EL sample and separately for SLIFE and non-SLIFE. I also conducted T tests and ANOVA to examine whether the differences in protective and risk factors were statistically significant. The strength of those differences was interpreted with a measure known as Cohen's d. Cohen's d is a standardized measure of the differences in means between two independent groups (Wuensch, 2009; Cohen, 1988). The interpretation of Cohen's d depends somewhat on the context, however. While a d of 0.25 is considered "small" in medical research, some consider it to be educationally meaningful for studies on risk factors in educational research such as mine (Slavin, 1990).

Question #3: What protective and risk factors influenced the educational outcomes of SLIFE in Rainbow County? To answer this question, I conducted bivariate regression analyses to estimate the relationships between the protective and

risk factors and the educational outcomes. For each educational outcome, protective and risk factors were examined separately for both SLIFE and non-SLIFE. It is important to note that the small size of the SLIFE subgroup (44 students) meant that it was less likely that estimates would show statistical significance than for the larger sized non-SLIFE subgroup (121 students).

Question #4: To what extent was LFS on arrival associated with educational outcomes for high school students classified as EL in Rainbow County? To answer this question, I employed bivariate regression analyses to estimate the association between each LFS variable and two educational outcomes: English language acquisition and HSAs. When examining HSA scores as the dependent variable, I examined the influence of each LFS indicator bivariately, and then estimated a model that included *English proficiency 2012* as an additional control variable because this variable had a strong and significant association with *HSA scores* (an unstandardized coefficient of 0.52, a standardized coefficient of 0.57, and a $p \leq 0.00$). After conducting bivariate analyses, I conducted multivariate analyses with each of the educational outcomes. These analyses employed the entire sample instead of the SLIFE subsample in order to have the sample sizes needed for robust multivariate analyses (Green, 1991; Allison, 1999). I created nine models all total: three for each educational outcome. The first model included only the LFS indicators in order to see how each of those indicators was associated with the outcome variables when the other indicators were held constant. I chose to use the three separate indicators instead of the single SLIFE variable for these multivariate analyses because previous analyses had shown that the LFS indicators were not well-correlated and had very

different relationships to each of the educational outcomes, and therefore did not function as a reliable scale variable (see the methods section on page 109 or findings page 131). I also decided to include these indicators in the model to better understand how each component of LFS was influencing the outcome variables.

The second model for each educational outcome included the LFS indicators with two control variables that were found in bivariate analyses to be significantly related to the outcome variables: *parental education* and *age*. These models showed the association between each variable and the educational outcomes when the control variables were held constant. *Length of residence* and *grade* were also found to have significant associations with the educational outcomes, but were not included because they would have introduced spurious relationships (see page 121 of the methods). Analyses with *HSA scores* as the outcome included *English proficiency 2012* as an additional control variable. The third model added to the second model the protective and risk factors that had significant or marginally significant associations with at least one of the educational outcomes in the previous bivariate analyses (see findings on page 145). This strategy allowed me to limit the number of variables in order to allow for more robust analyses.

Question #5: How does academic self-concept moderate or mediate the relationship between protective and risk factors and the educational outcomes of ELs in Rainbow County? To answer this question, I tested for moderation and mediation. Unfortunately, for these multiple regression analyses I had to use the whole sample instead of only the SLIFE subsample because the latter was not large enough for robust multiple regression analyses (Green, 1991; Allison, 1999).

A moderating effect occurs when the effect one variable has on another depends on the values of a third variable, or moderator (Aiken & West, 1991; Pedhazur, 1997; Howell, 2013; Allison, 1999; Jaccard, Turrisi, & Wan, 1990). When testing for moderating effects, a separate analysis had to be conducted for each independent variable with each educational outcome. Each analysis included three models: one including the independent variable with the educational outcome, the second adding academic self-concept, and the third being the same but including a variable representing the interaction effect between the independent variables and academic self-concept. Variables were centered when necessary and findings were double-checked using other methods for examining moderation effects. Continuous variables were centered, which is necessary when including interaction effects. To create a centered variable, the mean was subtracted from the original variable so all results centered around the mean.

A mediating effect occurs when the relationship between the dependent and independent variable is an indirect effect caused by the influence of a third variable, or mediator (Sobel, 1982). When testing for mediating effects, separate analyses had to be conducted for each independent variable. Each analysis included three models (Baron & Kenny, 1986). The first model estimated the association between the independent variable and the educational outcome. The second model estimated the association between the mediator (academic self-concept) and the independent variable. The third model estimated the association between the independent variable and the educational outcome while holding the mediator (academic self-concept) constant to determine whether the independent variable underwent a significant

decrease and whether the mediator still had a significant association with the dependent educational outcome. When the third model indicated mediation, Sobel tests were used to measure the level of mediation (Sobel, 1982).

Chapter 4: Findings.

4.1. The Prevalence of LFS on Arrival among High School Students Classified as ELs.

The first research question in this study was "How prevalent was LFS on arrival among high school students classified as EL in Rainbow County?" To answer this question I analyzed the frequency of the three LFS indicators and their simultaneous occurrence on time of arrival. The indicators used to measure LFS on time of arrival were *schooling gaps*, *low L1 literacy*, and *beginner English*.

4.1.1. Schooling Gaps.

As Table 9 shows, about half of the students in the sample were placed at grade level on arrival and did not experience a schooling gap. Nearly one-fourth (22.4%) of the students were placed into grades higher than the expected, and therefore were considered to have arrived with a schooling gap. For example, 8.5% were placed one grade higher (i.e. a one-year gap), 7.9% were placed two grades higher (i.e. a two-year gap), and 6% were placed three or more grades higher (i.e. a three-year gap). Also, many students (30.9%) were placed into grades lower than the expected considering the last grade completed in their homeland. In those cases, students had already completed 9th or 10th grade in their homeland but had been placed in 9th grade in U.S. schools because they had not taken the courses the state had required for grade placement. Although, the mean for students' was -.04 (SD = 1.30) indicating that students had no schooling gaps on average, schooling gaps of one or two years were quite common. Students with schooling gaps of one year or

more (37 students total, about 22%) were assigned a score of 1 for the dichotomous LFS indicator variable, *schooling gap*.

Table 9

Descriptive Statistics for Grade-Relative Schooling on Arrival (N = 165 Cases)

Grade-relative schooling	Percent
-5 years	0.6
-4	0.6
-3	4.8
-2	7.9
-1	8.5
0	46.7
1	23.0
2	6.7
3	1.2

Note. Scores of -1 or lower indicate schooling gaps.

4.1.2. Low L1 Literacy.

As Table 10 shows, most students (about 60%) reported being as literate in their 1st language (or language of previous schooling) when they arrived in the country as their U.S. peers were in English (mean = 3.40; SD = 0.78). There were some differences in their self-reported abilities for reading and writing. While twenty-nine students reported low L1 reading and twenty-nine reported low L1 writing, there were seven students who reported low abilities in one skill but not the other. Students with scores of 2.5. or lower in the combined measure were assigned a score of one for the dichotomous LFS indicator variable, *low L1 literacy*, which indicated some self-reported low L1 literacy. Overall, fewer than 18% of the students (29 total) had *low L1 literacy*.

Table 10

Descriptive Statistics for Self-Reported L1 Literacy on Arrival (N = 165 Cases)

Self-reported L1 literacy	Percent
1.00 Strongly disagree	1.8
1.50	2.4
2.00	6.1
2.50	7.3
3.00	21.8
3.50	7.3
4.00 Strongly agree	53.3

4.1.3. Beginner English.

As Table 11 shows, most students in the sample had very low English skills on arrival. On average, students had arrived with beginner-level English proficiency (mean = 2.21; SD = 1.29). Over 45% of the students had English proficiency scores of one, the absolute minimum. Over 60% of the students (100 total) arrived to this country with scores of two or lower on the LAS Links test.[39] Students with English proficiency levels of two or lower were assigned a score of 1 for the dichotomous LFS indicator variable, *beginner English*.

Table 11

Descriptive Statistics for English Proficiency on Arrival (N = 165 Cases)

English proficiency on arrival	Percent
1 Low beginner	45.5
2 High beginner	15.2
3 Low intermediate	18.2
4 High intermediate	17.0
5 Advanced	4.2

[39] See the methods section page 100 for a description of the LAS Links test.

4.1.4. Limited Formal Schooling.

The *LFS* variable was created by adding up the number of LFS indicators each student had based on his/her scores on the dichotomous variables *schooling gap, low L1 literacy*, and *beginner English*. Students were identified as "students with limited or interrupted formal education" (SLIFE) if they obtained scores of two or higher in the LFS variable, based on a range from zero to three.

As Table 12 shows, nearly 27% of the sample had two or more of the LFS indicators. Over 70% of the students had at least one of the indicators, and about 30% of the sample had none. Based on descriptive statistics, *beginner English* was the most prevalent of the LFS indicators at 60%. The second most common was *schooling gap* at 22% followed by *low L1 literacy* with less than 18% of students having that indicator.

Table 12

Descriptive Statistics for the LFS Composite Variable (Number of Indicators)

LFS score	Percent
3 indicators	3.0
2	23.6
1	43.6
0	29.7

Given that the three indicators were combined to form an overall measure of LFS on arrival, I examined their correlations to determine their reliability when used together as a scale. As Table 13 shows, *beginner English* had a significant and moderate correlation with *schooling gap* ($r = 0.29$). Interestingly, however, these two indicators were not correlated with *low L1 literacy*. The correlations between *beginner English* and *low L1 literacy* and between *schooling gap* and *low L1 literacy*

were not evident (r = -0.08 and r = 0.02). In other words, students who had arrived with schooling gaps of at least a year or with very low English skills were not any more likely to report having arrived with low L1 literacy. I will further discuss this phenomenon in the last chapter of the dissertation.

Table 13.

Correlations between LFS Indicators

	Schooling gap	Low L1 literacy
Schooling gap		
Low L1 literacy	0.02	
Beginner English	0.29***	-0.08

Note. Significant correlations with p = .001 or lower indicated by ***, .01 or lower indicated by **, and .05 or lower indicated by *.

Because of the lack of correlation between *low L1 literacy* and the other two LFS indicators, the *LFS* composite variable formed from those three indicators was found to be unreliable for use as a scale. In statistical methods, when different variables are used to form one variable, or scale variable, it is assumed they measure the same construct to some degree and should therefore be correlated; otherwise the scale is considered unreliable (George & Mallery, 2003). The Cronbach's alpha for *LFS* was 0.22, which is very low. Furthermore, I found that applying strategies such as changing the way the indicators were operationalized, standardizing the indicators, or weighting the indicators, did not solve the problem. A Kuder-Richardson test[40] showed that the only way to improve the scale would have been to remove *low LI literacy*, but doing so would have made the LFS scale inconsistent with how LFS is described in educational literature.

[40] A Kuder-Richardson test, like Cronbach's alpha, is a measure of scale reliability, but is more appropriate for scales consisting of dichotomous variables, such as mine.

This study intended to examine the effects of LFS on learning outcomes while operationalizing LFS as it has been described in the literature. For that reason, I decided to use the scale as-is, regardless of its lack of reliability. To compensate for the lack of scale reliability, I also examined the effects of each LFS indicator separately and have presented them in the findings.

That said, 26.7% (or 44 cases) of the students in this study were classified as SLIFE, based on having two or more of the LFS indicators on arrival. Table 14 shows that, on the average, 77% of the students in the SLIFE subgroup had arrived with schooling gaps, 39% with low L1 literacy, and 95% of them with beginner-level English.

Table 14.

Descriptive Statistics for LFS and Its Indicators on Arrival for the SLIFE Subgroup (n = 44).

	LFS composite score	Grade-relative schooling	Schooling gaps (%)	L1 literacy	Low L1 literacy (%)	English proficiency	Beginner English (%)
Mean	2.11	-1.55	77	2.93	39	1.19	95
SD	0.32	1.30		0.85		0.50	
Minimum	2.00	-5.00		1.00		1.00	
Maximum	3.00	1.00		4.00		3.00	

4.2. Differences in the Prevalence of Protective, Risk, and other Relevant Factors among SLIFE and Non-SLIFE.

The second research question in this study was "Were school-related protective factors and personal risk factors more or less prevalent for SLIFE than for the other students classified as EL in Rainbow County?" To answer this question, I report differences in the prevalence of protective and risk factors between SLIFE and

non-SLIFE after reporting the prevalence for the overall sample. The differences shown here were estimated through T-test or ANOVA. The strength of these differences was determined using Cohen's d.

4.2.1. Protective Factors and SLIFE.

The protective factors examined in this study were school-related factors shown in other studies to support better academic outcomes. They included perceived pedagogical caring (Wentzel, 1997; Valenzuela, 1999), social integration (Alva, 1993), sheltered ESOL classes (Callahan, Wilkinson, Muller, & Frisco, 2009), out-of-school help, and extra-curricular activities (Zaff, Moore, Papillo, & Williams, 2003). This section also includes findings for academic self-concept, a personal protective factor used as an intervening variable in subsequent regression analyses (Gordon Rouse, 2001).

As Table 15 shows, students in this sample indicated high levels of academic self-concept and pedagogical caring. For example, over 87% of ELs agreed with the statement, "Math and science are important for my future career," and over 83% agreed with the statement, "My teachers think I am a good student." In contrast, their social integration and out-of-school help reports were less positive. Only 58% agreed with the statements "I have many American friends in my school," and "Someone from my family, community, or church helps me learn English or study." Additionally, students were typically taking about two ESOL classes and participating in at least one extra-curricular activity.

Comparing SLIFE to non-SLIFE showed important differences in the prevalence of some of the protective factors in this sample. Although the scores still

remained positive on average (three points or higher), SLIFE reported significantly lower *academic self-concept* (d = -0.34) and *pedagogical caring* (d = -0.43) than non-SLIFE. Also, a marginally statistically significant difference was observed in *social integration*; SLIFE reported lower *social integration* than non-SLIFE (d = -0.30). In contrast, the prevalence of ESOL classes was higher for SLIFE than for non-SLIFE. On average, SLIFE were taking one more ESOL class each day than non-SLIFE (d = 0.67). Effect sizes, as reflected in their Cohen's d values, show meaningful differences between the two groups.

Table 15.

Mean Differences in Protective Factors between Non-SLIFE and SLIFE.

	All ELs (n = 165)	SLIFE (n = 44)	Non-SLIFE (n = 121)	Difference between the two groups
Academic self-concept	3.37	3.29	3.39	-0.11*
(from 1 = sd to 4 = sa)	(0.31)	(0.05)	(0.03)	(0.05)
Pedagogical caring	3.14	3.00	3.20	-0.20**
(from 1 = sd to 4 = sa)	(0.43)	(0.06)	(0.04)	(0.07)
Social integration	2.66	2.52	2.71	-0.19†
(from 1 = sd to 4 = sa)	(0.64)	(0.10)	(0.06)	(0.11)
# of ESOL classes 2011-12	2.15	2.86	1.88	0.98***
(0-5)	(1.49)	(0.23)	(0.13)	(0.25)
Out-of-school help	2.59	2.50	2.62	-0.12
(from 1 = sd to 4 = sa)	(.97)	(0.13)	(0.09)	(0.17)
# of extra-curricular activities	1.41	1.41	1.42	-0.01
(0-4)	(1.20)	(0.16)	(0.11)	(0.21)

Note. Higher numbers indicate stronger protective factors assumed to facilitate resilience. sd = strongly disagree and sa = strongly agree. Means and their standard deviations in parentheses are shown in the columns for "All ELs," "SLIFE," and "non-SLIFE." Mean differences are listed with their standard errors in the column for "Difference." Statistically significant differences are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

4.2.2. Risk Factors and SLIFE.

The risk factors examined were personal factors shown in other studies to be associated with lower academic outcomes; namely, traumatic experiences, separations from caretakers, high social distance, negative peer educational influences, a lack of

authoritative parenting that supports education, and hours spent working in employment.

As Table 16 shows, the prevalence of the risk factors was generally low in the sample. On average, the ELs in this sample disagreed that they had past traumatic experiences, negative peer influences, or a lack of authoritative parenting. Scores for *separations from caretakers* and *social distance*, although somewhat higher, were neutral. Also, the average number of hours worked after school was 6.23, only 10% of the students worked 20 hours or more, and most students did not work at all.

Comparing SLIFE to non-SLIFE revealed no statistically significant differences in risk factors with one exception. On average, SLIFE worked fewer hours in employment per week than non-SLIFE (3.68 compared to 7.18; d = -0.37). The strength of the difference for *hours spent working* was moderate.

Table 16.

Mean Differences in Risk Factors between Non-SLIFE and SLIFE

	All ELs (n = 165)	SLIFE (n = 44)	Non-SLIFE (n = 121)	Difference between the two groups
Traumatic experiences (from 1 = sd to 4 = sa)	2.07 (0.07)	1.95 (0.85)	2.11 (0.74)	-0.16 (0.14)
Separations from caretakers (from 1 = sd to 4 = sa)	2.45 (1.04)	2.44 (.99)	2.46 (1.06)	-0.02 (0.18)
Social distance (from 1 = sd to 4 = sa)	2.33 (0.58)	2.33 (0.59)	2.33 (0.58)	-0.00 (0.10)
Negative peer influences (from 1 = sd to 4 = sa)	1.95 (0.49)	2.02 (0.41)	1.91 (0.52)	0.11 (0.09)
A lack of authoritative parenting (from 1 = sd to 4 = sa)	1.74 (0.51)	1.85 (0.45)	1.71 (0.52)	0.14 (0.09)
Hours spent working (0-48 hours)	6.23 (10.28)	3.68 (7.33)	7.33 (11.06)	-3.50* (1.50)

Note. Higher numbers indicate stronger risk factors assumed to disable resilience. sd = Strongly disagree and sa = Strongly agree. Means and their standard deviations in parentheses are shown in the columns for "All ELs," "SLIFE," and "non-SLIFE." Mean differences are listed with their standard errors in the column for "Difference." Statistically significant differences are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq$

.001. † indicates marginal significance with p ≤ .1

4.2.3. Other Factors of Interest and SLIFE.

Other factors were examined descriptively in this section as they were found in preliminary analyses to have strong correlations with achievement and English proficiency outcomes for ELs, the dependent variables in this study; namely, length of residence, parental education, age, and grade.

As Table 17 shows, the average *length of residence* for students in the sample was a little over two years and the typical education level of parents was a little less than twelve years of schooling (a high school diploma). Students in this sample were 17 years old and were enrolled in 10th grade, on average.

Table 17.

Mean Differences in Other Factors of Interest between Non-SLIFE and SLIFE.

	All ELs (n = 165)	SLIFE (n = 44)	Non-SLIFE (n = 121)	Difference between the two groups
Length of residence	2.34	2.72	2.20	+0.52†
(0-7 years)	(1.59)	(1.58)	(1.57)	(0.28)
Parental education	11.71	8.14	13.02	-4.88***
(0-26 years)	(5.48)	(5.13)	(5.02)	(0.90)
Age	17.47	17.32	17.53	-0.21
(14-21 years)	(1.65)	(1.62)	(1.66)	(0.29)
Grade	10.13	9.84	10.24	-0.40*
(9-12)	(1.07)	(0.94)	(1.10)	(0.19)

Note. Means are shown with their standard deviations in parentheses in the columns for "All ELs," "SLIFE," and "non-SLIFE." Mean differences are listed with their standard errors in the column for "Difference." Statistically significant differences are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Comparing SLIFE to non-SLIFE showed important differences in the prevalence of some of these factors. There were significant differences in parents' levels of education (d = 0.99) and grade levels (d = -0.39). The average level of parental education was 8th grade for SLIFE, whereas the average level was one year

of college for their counterparts. Also, there was a marginally significant difference in *length of residence* for the two groups ($p = 0.06$). SLIFE had spent 0.52 more years in the country than non-SLIFE ($d = 0.33$).

4.3. The Influences of Protective Factors and Risk Factors on Educational Outcomes.

The third research question in this study was "What protective and risk factors influenced the educational outcomes of SLIFE in Rainbow County?" The educational outcomes examined were English language acquisition and scores on high school assessments (HSAs). English language acquisition was measured in two ways. The first one, *English proficiency 2012,* was the students' overall scores on the 2012 WIDA ACCESS test.[41] The second English language acquisition variable, *English gain 2011-12*, was computed by subtracting students' 2011 LAS Links English proficiency scores from their 2012 WIDA ACCESS English proficiency scores. To examine HSA scores, I combined students' 2012 Algebra, Biology, and 10th grade English HSA scores. To answer this question, I conducted bivariate regression analyses. Separate bivariate analyses were run for a SLIFE subgroup and a non-SLIFE subgroup for each of the protective and risk factors and each of the educational outcomes in order to see whether the factors influenced each group differently.

4.3.1. School-Related Protective Factors and English Language Acquisition.

As Table 18 indicates, few protective factors had bivariate associations with English language acquisition for SLIFE or non-SLIFE.

[41] Information about this test is provided in the methods section on page 111.

For SLIFE, *pedagogical caring* had a marginally significant negative association (p = 0.08). As expected *the number of ESOL classes 2011-12* had a significant negative association with *English proficiency 2012* as students generally took ESOL classes because their English proficiency was low. For each point of *pedagogical caring*, *English proficiency 2011-12* was 0.77 points lower (β[42] = -0.27). For each ESOL class taken, *English proficiency 2012* scores were 0.29 points lower (β = -0.38).

Table 18.

Bivariate Regression Estimates for Protective Factors and English Language Acquisition

	English proficiency 2012		English gain 2011-12	
	SLIFE (n = 44)	Non-SLIFE (n = 121)	SLIFE (n = 39)	Non-SLIFE (n = 88)
Pedagogical caring (from 1 = sd to 4 = sa)	-0.77† (0.43)	0.12 (0.21)	0.40 (0.29)	0.10 (0.19)
Social integration (from 1 = sd to 4 = sa)	0.14 (0.28)	0.23† (0.14)	0.09 (0.17)	0.08 (0.14)
# of ESOL classes 2011-12 (0-5)	-0.29** (0.11)	-0.33*** (0.06)	0.15† (0.08)	0.13* (0.06)
Out-of-school help (from 1 = sd to 4 = sa)	0.21 (0.21)	-0.18* (0.09)	0.13 (0.13)	-0.08 (0.08)
# of extra-curricular activities (0-4)	0.05 (0.16)	0.17* (0.07)	-0.14 (0.11)	0.06 (0.06)

Note. Greater numbers for protective factors imply more benefits. sd = strongly disagree and sa = strongly agree. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

In addition, there was a marginally significant positive association between *the number of ESOL classes* and *English gain 2011-12* (p = 0.06). For each ESOL class taken, *English gain 2011-12* was 0.15 points higher (β = 0.31). This seeming

[42] This study uses the symbol, β, for a standardized coefficient. Standardized coefficients provide a standardized measure that can be used to compare the strengths of association two different independent variables have with a dependent variable when those independent variables have different metrics.

contradiction (a negative coefficient associated with English proficiency and a positive coefficient associated with English gains) may be due to the fact that ESOL classes were an academic intervention designed for, and generally given to, students with lower English proficiency, but the students in those classes were learning English faster.

For non-SLIFE, *the number of extra-curricular activities* had a significant positive association and *social integration* had a marginally significant ($p = 0.10$) positive association with *English proficiency 2012*. With each extra-curricular activity non-SLIFE participated in, the *English proficiency 2012* score was 0.17 points higher ($\beta = 0.21$). For each point of *social integration, English proficiency 2012* was 0.23 points higher ($\beta = 0.15$). Also, *the number of ESOL classes 2011-12* and *out-of-school help* had significant negative associations with *English proficiency 2012*. For each ESOL class a student took, *English proficiency 2011-12* was .33 points lower ($\beta = -0.47$) while *English gains 2011-12* was 0.13 higher ($\beta = 0.24$). For each point of *out-of-school help*, *English proficiency 2012* was 0.18 points lower ($\beta = -0.18$).

Similarly to the finding of SLIFE, only *the number of ESOL classes* had a significant association with *English gains 2011-12* for non-SLIFE. Of all the protective factors, only ESOL classes seemed to be affecting the actual rate of English learning ($\beta = 0.24$).

4.3.2. Relationships between Personal Risk Factors and English Language Acquisition.

As Table 19 indicates, most of the associations between risk factors and *English proficiency 2012* or *English gains 2011-12* were non-significant in this

sample. Although, the lack of significant findings may be partially due to small sample sizes, these risk factors seemed to have had little bearing on students' English acquisition. Two interesting exceptions are discussed in the following paragraph.

For SLIFE, *traumatic experiences* had a significant negative association with *English gains 2011-12*. For each point of *traumatic experiences, English gains 2011-12* was 0.30 points lower (β = -0.36). For non-SLIFE, *social distance* had a marginally significant positive association with *English proficiency 2012*. For each point increase in *social distance*, *English proficiency 2012* was 0.28 points higher (β = 0.17).

Table 19

Bivariate Regression Estimates for Risk Factors and English Language Acquisition

	English proficiency 2012		English gain 2011-12	
	SLIFE (n = 44)	Non-SLIFE (n = 121)	SLIFE (n = 39)	Non-SLIFE (n = 88)
Traumatic experiences (from 1 = sd to 4 = sa)	0.23 (0.20)	0.04 (0.12)	-0.30* (0.13)	-0.02 (0.11)
Separations from caretakers (from 1 = sd to 4 = sa)	0.21 (0.18)	0.13 (0.08)	0.12 (0.12)	0.05 (0.08)
Social distance (from 1 = sd to 4 = sa)	0.22 (0.31)	0.28† (0.15)	0.18 (0.19)	0.00 (0.14)
Negative peer influences (from 1 = sd to 4 = sa)	0.45 (0.43)	-0.11 (0.17)	-0.18 (0.28)	-0.12 (0.15)
A lack of authoritative parenting (from 1 = sd to 4 = sa)	0.29 (0.39)	-0.04 (0.17)	-0.29 (0.25)	0.23 (0.15)
Hours spent working (0-48 hours)	0.03 (0.02)	0.00 (0.01)	0.02 (0.02)	0.01 (0.01)

Note. Greater numbers for risk factors imply greater disadvantages. sd = strongly disagree and sa = strongly agree. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

4.3.3. Relationships between Other Factors of Significance and English Language Acquisition.

As Table 20 indicates, there were other factors that had significant relationships with English language acquisition besides the protective and risk factors, but their relationships were different between SLIFE and non-SLIFE.

For SLIFE, *length of residence* and *grade* had significant positive associations with *English proficiency 2012.* For each year SLIFE had spent in Rainbow County, their *English proficiency 2012* was 0.33 points higher (β = 0.45). For each year of grade, English proficiency was 0.36 points higher (β = 0.30). On the contrary, the same two variables had negative associations with *English gain 2011-12.* For each year SLIFE had spent in the U.S., their *English gain 2011-12* was 0.17 points lower (β = -0.34). For each year of grade, *English gain 2011-12* was 0.26 points lower (β = -0.35). In other words, students who had spent more time in the U.S., or were in higher grades, had higher English proficiency, but were learning English more slowly.

For non-SLIFE, *parental education* and *grade* had significant positive associations and age had a negative association with *English proficiency 2012*. For each year of *parental education*, *English proficiency 2012* was 0.06 points higher (β = 0.29). For, each year of *grade*, *English proficiency 2011-12* was 0.22 points higher (β = 0.25). Also for each year of *age, English proficiency 2011-2012* was 0.14 points lower (β = -0.24).

Table 20.

Bivariate Regression Estimates for Other Factors of Interest and English Language Acquisition

	English proficiency 2012		English gain 2011-12	
	SLIFE (n = 44)	Non-SLIFE (n = 121)	SLIFE (n = 39)	Non-SLIFE (n = 88)
Length of residence (0-7 years)	0.33** (0.10)	0.04 (0.06)	-0.17** (0.08)	-0.16** (0.05)
Parental education (0-26)	0.44 (0.04	0.06** (0.02)	0.00 (0.03)	-0.01 (0.01)
Age (14-21)	-0.12 (0.11)	-0.14** (0.05)	-0.04 (0.08)	-0.03 (0.05)
Grade (9-12)	0.36* (0.18)	0.22** (0.08)	-0.26* (0.12)	-0.14* (0.07)

Note: Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Similarly to findings with SLIFE, *grade* and *length of residence* had significant negative associations with *English gains 2011-12*. For each year of *grade, English gain 2011-2012* was 0.14 points lower ($\beta = -0.21$). For each year of *length of residence*, *English gain 2011-12* was 0.16 points lower ($\beta = -0.32$).

4.3.4. Relationships between School-Related Protective Factors and HSA Scores.

Except for *the number of ESOL classes 2011-12*, bivariate associations between protective factors and *HSA scores* were not statistically significant. As Table 21 indicates, the association between *the number of ESOL classes 2011-12* and *HSA scores* was marginally significant for non-SLIFE ($p = 0.07$). For each ESOL class taken, *HSA scores* was 0.15 standard deviations lower ($\beta = -0.20$).

Table 21.

Bivariate Regression Estimates for Protective Factors and HSA Scores

	SLIFE (n = 33)	Non-SLIFE (n = 83)
Pedagogical caring	0.09	0.12
(from 1 = sd to 4 = sa)	(0.42)	(0.22)
Social integration	0.03	-0.15
(from 1 = sd to 4 = sa)	(0.22)	(0.15)
# of ESOL classes 2011-12	-0.04	-0.15†
(0-5)	(0.11)	(0.08)
Out-of-school help	-0.13	0.03
(from 1 = sd to 4 = sa)	(0.15)	(0.08)
# of extra-curricular activities	0.17	-0.06
(0-4)	(0.18)	(0.10)

Note. Greater numbers for protective factors imply more benefits. sd = strongly disagree and sa = strongly agree. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

4.3.5. Relationships between Personal Risk Factors and HSA Scores.

As Table 22 indicates, the risk factors had no significant associations with HSA scores.

Table 22

Bivariate Regression Results for Risk Factors and HSA Scores

	SLIFE (n = 33)	Non-SLIFE (n = 83)
Traumatic experiences	0.21	-0.07
(from 1 = sd to 4 = sa)	(0.18)	(0.14)
Separations from caretakers	0.07	0.08
(from 1 = sd to 4 = sa)	(0.16)	(0.10)
Social distance	-0.38	0.01
(from 1 = sd to 4 = sa)	(0.25)	(0.17)
Negative peer influences	0.06	-0.08
(from 1 = sd to 4 = sa)	(0.38)	(0.19)
A lack of authoritative parenting	-0.33	-0.08
(from 1 = sd to 4 = sa)	(0.34)	(0.19)
Hours spent working	-0.01	-0.01
(0-48 hours)	(0.02)	(0.01)

Note. Greater numbers for risk factors imply greater disadvantages. sd = strongly disagree and sa = strongly agree. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$.

4.3.6. Relationships between Other Factors and HSA Scores.

As Table 23 indicates, bivariate analyses revealed that there were significant associations between *HSA scores* and *length of residence*, *parental education*, *age*, and *English proficiency 2012*.

For SLIFE, *parental education* and *English proficiency 2012* had significant positive associations with HSA scores. For each year of schooling parents had, *HSA scores* were 0.08 standard deviations higher (β = 0.48). For each level of English proficiency, *HSA scores* were 0.29 standard deviations higher (β = 0.34). Also, there was a negative association between age and *HSA scores*.

Table 23

Bivariate Regression Results for Other Factors of Interest and HSA Scores (N = 116)

	SLIFE (n = 33)	Non-SLIFE (n = 83)
Length of residence (0-7 years)	-0.16	-0.14*
	(0.11)	(0.07)
Parental education (0-26 years)	0.08**	0.04*
	(0.03)	(0.02)
Grade (9-12)	-.25	-.05
	(.17)	(.11)
Age (14-21 years)	-0.24*	-0.04
	(0.11)	(0.06)
English proficiency 2011-12 (1-6)	0.29*	0.56***
	(0.14)	(0.09)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

For non-SLIFE, *parental education* and *English proficiency 2012* also showed significant positive associations with *HSA score.* For each year of schooling their most educated parent had, *HSA scores* were 0.04 standard deviations higher (β = -0.23). The *HSA scores* were also 0.56 standard deviations higher for each level of *English proficiency 2012* (β = 0.59). Also, there was a negative association between

length of residence and HSA scores. For each year non-SLIFE had spent in Rainbow County, *HSA scores* were 0.14 standard deviations lower ($\beta = -0.23$).

4.4. Associations between LFS and High School ELs' Educational Outcomes.

The fourth research question in this study was "To what extent was LFS on arrival associated with educational outcomes for high school students classified as EL in Rainbow County?" To answer this question, I first conducted regression analyses between the LFS indicators and two educational outcomes: English language acquisition and HSAs. Regression analyses with English language acquisition outcomes were bivariate analyses with no controls, but the analyses with HSA scores as outcomes included English proficiency 2012 as a control variable (see methods page 124).

After those initial, simple regression analyses, I conducted multiple regression analyses. These multivariate analyses used the LFS indicators instead of the *SLIFE* variable since previous analyses had shown that the LFS indicators were not correlated well enough to form a reliable scale (see Table 5 on page 109), and that each indicator had very different associations with the educational outcomes examined as dependent variables (see findings starting on page 145). Analyses were conducted using the whole sample (see methods page 123).

4.4.1. Bivariate Estimates for LFS Indicators and ELs' English Language Acquisition.

Schooling gap and English language acquisition. Table 24 indicates that there was a strong and significant negative association between *schooling gaps* and *English proficiency 2012*. On average, students with a schooling gap on arrival had

English proficiency 2012 scores 0.59 points lower than students who did not (β = -0.22). However, this was not the case for *English gain 2011-12*; the association between *schooling gaps* and *English gain 2011-12* was not statistically significant.

The results indicated that students who had arrived with gaps of one or more years in their grade-relative schooling were more likely to have lower English proficiency in 2012 but were not learning English more slowly. Students with schooling gaps on arrival were more likely to also have lower English proficiency on arrival (see Table 13 on page 131) and were therefore more likely to still have lower English proficiency later in 2012, even if they were learning at the same rate. Supplementary analyses (not included in the document) showed that even for students who had greater gaps in their schooling (e.g. two years or more instead of one), there was no significant difference in the rate of English language acquisition.

Table 24

Bivariate Regression Estimates for Schooling Gaps on Arrival and English Language Acquisition

	English proficiency 2012 (n = 165)	English gain 2011-12 (n = 127)
Schooling gap (1 = yes)	-0.59***	-0.14
	(0.20)	(0.15)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Low L1 literacy and English language acquisition. Table 25 indicates that there was a strong and statistically significant negative association between *low L1 literacy* and *English proficiency 2012* but not between *low L1 literacy* and *English*

gain 2011-12. On average, students with low L1 literacy on arrival had *English proficiency 2012* scores 0.66 points lower than students who did not (β= -0.23).

Supplementary analyses (not included here) showed that *English gain 2011-12* had a statistically significant negative relationship with very low L1 literacy (scores of 2 or lower out of 4 instead of 2.5 or lower). This result suggests that the relationship between L1 literacy and *English gains 2011-12* depended on how low the L1 literacy was. In other words, low L1 literacy did not have a significant negative association with the rate of English language acquisition unless it was very low.

Table 25

Bivariate Regression Estimates for Low L1 Literacy on Arrival and English Acquisition

	English proficiency 2012 (n = 165)	English gain 2011-12 (n = 127)
Low L1 literacy (1 = yes)	-0.66** (0.22)	-0.26 (0.17)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Beginner English and English language acquisition. Table 26 indicates that there was a strong and statistically significant negative association between *beginner English* and *English proficiency 2012* but not between *beginner English* and *English gain 2011-12*. On average, students who arrived with beginner English had *English proficiency 2012* scores 0.94 points lower than those who had not arrived with beginner English (β = -0.41). Thus, students who had arrived with beginner English were more likely to still have lower English proficiency in 2012 but were generally learning English at a similar rate.

Table 26

Bivariate Regression Estimates for Beginner English on Arrival and English Language Acquisition

	English proficiency 2012 (n = 165)	English gain 2011-12 (n = 127)
Beginner English (1 = yes)	-0.94*** (0.16)	-0.14 (0.14)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Supplementary analyses (not included here) showed that students' English proficiency on arrival did not have a have a stronger association with *English proficiency 2012* or *English gain 2011-12* when the English proficiency on arrival was low-beginner English (scores of 1 out of 5) instead of just *beginner English* (scores of 2 or lower out of 5).

SLIFE and English language acquisition. The *SLIFE* variable was a dichotomous or "dummy" variable used to identify students with two or more of the LFS indicators: *schooling gap*, *beginner English*, and *low L1 literacy*. Table 27 indicates that *SLIFE* had a strong and significant negative association with *English proficiency 2012* and a marginally significant ($p = 0.09$) negative association with *English gain 2011-12*. SLIFE had *English proficiency 2012* scores that were a full point lower than those of non-SLIFE ($\beta = -0.40$) and *English gain 2011-12* scores that were 0.23 points lower (β -0.15). In other words, SLIFE typically had lower *English proficiency 2012* and were learning English more slowly. Thus, having two or more of the indicators at once gave students a greater disadvantage with English language acquisition than just having one of the indicators.

Table 27.

Bivariate Regression Estimates for LFS and English Language Acquisition

	English proficiency 2012 (n = 165)	English gain 2011-12 (n = 127)
SLIFE (1 = yes)	-1.00***	-0.23†
	(0.18)	(0.14)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

4.4.2. Bivariate Estimates for LFS Indicators and HSA Scores.

In this section, I present results from similar analyses as in the previous section but with *HSA scores* as the dependent variable and including English proficiency 2012 as a control variable (see methods page 123). Given that preliminary analyses showed a strong and significant association between English proficiency and HSA scores ($r = 0.34$; $p = .05$), I felt reporting adjusted estimates was necessary to better understand the relationships between LFS and HSA scores. Introducing this control allowed me to estimate the degree to which the associations between the HSA scores and the LFS indicators were explained by students' English proficiency. Did SLIFE have lower HSA scores because of lower cognitive or academic skills, or was it because limited English proficiency hindered their ability to learn and demonstrate their knowledge?

Schooling gap and HSA score. As Table 28 indicates, *schooling gap* had a strong and significant negative association with *HSA scores* in Model 1 when *English proficiency 2012* was not being controlled for. Students who had arrived with a schooling gap had *HSA scores* that were nearly a half a standard deviation lower than those who had not ($\beta = -0.22$).

Table 28

Multivariate Regression Estimates for Schooling Gaps on Arrival and 2011-12 HSA Scores (n = 116)

	Model 1	Model 2
	Not controlling for *English proficiency 2012*	Controlling for *English proficiency 2012*
Schooling gap (1 = yes)	-.49*	-.35*
	(.20)	(.17)
English proficiency 2012		.50***
		(.07)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

In Model 2, when *English proficiency 2012* was controlled for, the association was still significant, although the coefficient decreased by nearly 29% (when comparing coefficients). Thus, the negative association was not entirely explained by limited English proficiency. We may conclude that arriving with schooling gaps predicts lower HSA scores, even after controlling for English skills at the time of the test.

Supplementary analyses (not included here) showed that *schooling gaps* had a stronger association with *HSA scores* when the schooling gaps on arrival were greater (e.g. gaps of two years or more instead of just one year or more). Therefore, it seems that the effect schooling gaps had on *HSA scores* depended on the size of the gaps.

Low L1 literacy and HSA scores. As Table 29 indicates, *low L1 literacy* had no significant association with *HSA scores* in Model 3 when *English proficiency 2012* was not controlled for. Supplementary analyses (not shown here) indicated that this was true even for using stronger measures of lower L1 literacy such as with scores of 2 or lower out of 4 (instead of using a cut-off score of 2.5 points). These findings

suggested that having low literacy in the first language or language of previous schooling did not cause students to have a disadvantage on standardized tests of academic content in U.S. schools. At least, this was the case when estimates were based on students' self-reported L1 literacy levels. This did not change in Model 4 when *English proficiency 2012* was introduced.

Table 29

Multivariate Regression Estimates for Low L1 Literacy and 2011-12 HSA Scores (n = 116)

	Model 3	Model 4
	Not controlling for *English proficiency 2012*	Controlling for *English proficiency 2012*
Low L1 literacy (1 = yes)	-.13 (.22)	-.11 (.19)
English proficiency 2012		.53*** (.07)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Beginner English and HSA scores. As Table 30 indicates, *beginner English* had a significant negative association with *HSA scores* in Model 5 when *English proficiency 2012* was not controlled for. Students who arrived with beginner-level English proficiency had *HSA scores* that were 0.43 standard deviations lower than those of other students ($\beta = -0.22$). Supplementary analyses (not included here) showed that students' English proficiency on arrival did not have a stronger association with *HSA scores* when the English proficiency on arrival was low-beginner English (scores of 1 out of 5) instead of just *beginner English* (scores of 2 or lower out of 5).

However, in Model 6 when *English proficiency 2012* was controlled for, the relationship between *beginner English* on arrival and *HSA scores* was no longer significant, but *English proficiency 2012* was. These results suggest that the relationship between students' *beginner English* and HSA scores was entirely mediated by the students' English proficiency at the time of the HSA. These findings showed two patterns of risk: 1) students who had arrived with beginner-level English were still likely to have lower English proficiency later in 2012; and 2) students with lower English proficiency in 2012 also had lower average HSA scores. It is important to remind the reader that the tests were written in English and all instruction was in English only.

Table 30

Multivariate Regression Estimates for Beginner English and 2011-12 HSA Scores (N = 116)

	Model 5	Model 6
	Not controlling for *English proficiency 2012*	Controlling for *English proficiency 2012*
Beginner English (1 = yes)	-.45*	-.12
	(.17)	(.16)
English proficiency 2012		.50***
		(.07)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

SLIFE and HSA scores. As Table 31 indicates, there was a significant negative association between *HSA scores* and the *SLIFE* dummy variable in Model 7 when *English proficiency 2012* was not controlled for. SLIFE had *HSA scores* that were 0.65 standard deviations lower than those of non-SLIFE ($\beta = -0.31$).

Table 31

Bivariate Regression Estimates for SLIFE and HSA Scores (n = 116)

	Model 7	Model 8
	Not controlling for *English proficiency 2012*	Controlling for *English proficiency 2012*
SLIFE (1 = yes)	-.65***	-.30†
	(.18)	(.17)
English proficiency 2012		.48***
		(.07)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

In Model 8, when *English proficiency 2012* was controlled for, the association was still marginally significant (p = 0.08), although the coefficient decreased by nearly 46% (from -0.65 to -0.30; β changed from -0.31 to -0.14). Thus, the negative association was not entirely explained by limited English proficiency. We may conclude that SLIFE had lower HSA scores, even after controlling for English skills at the time of the tests. Considering that *schooling gaps* was the only LFS indictor that had a significant association with HSA scores when English proficiency was held constant, we may suspect that much of the effect of the *SLIFE* variable may be due to schooling gaps.

4.4.3. Multivariate Estimates for the Association between LFS Indicators, Significant Protective, Risk, and Other Factors, and Educational Outcomes.

The following section shows estimates from multivariate models for each of the educational outcomes: *English proficiency 2012*, *English gains 2011-12*, and *HSA scores*. Nine models were estimated all total, one for each outcome. The full sample instead of the SLIFE subgroup was used for each model since the SLIFE subgroup was too small to allow for robust multiple regression estimates. These models only

include protective factors, risk factors, and other variables of interest shown to be significant in the bivariate analyses, because sample size limitations required that I restrict the number of variables. *Length of residence* and *grade* were not included because they were indicating spurious relationships (see page 121).

Multivariate estimates with English proficiency 2012. Model 9 on Table 32 shows estimates for each LFS indicator when the others were held constant. *Beginner English* and *low L1 literacy* had significant negative associations with *English proficiency 2012*. Students who had arrived with beginner English proficiency had *English proficiency 2012* scores that were 0.87 points lower than those who had not ($\beta = -0.38$). Students who had arrived with low L1 literacy had *English proficiency 2012* scores that were 0.75 points lower than those who had not ($\beta = -0.26$).

Model 10 on Table 32 shows estimates for each LFS indicator after controlling for *parental education* and *age*. After controlling for covariates, the negative associations between *English proficiency 2012* and the two LFS indicators, *beginner English* and *low L1 literacy*, remained statistically significant although the magnitude of the coefficient decreased by 0.09 points (10%) for *beginner English* and 0.07 points (9%) for *low L1 literacy*. Students who had arrived with beginner English proficiency had scores that were 0.78 points lower than those who had not ($\beta = -0.34$). Students who had arrived with low L1 literacy had *English proficiency 2012* scores that were 0.68 points lower than those who had not ($\beta = -0.23$). Both control variables had a significant effect on *English proficiency 2012*.

Table 32

Multiple Regression Estimates for English Proficiency 2012 (n = 165)

	Model 9	Model 10	Model 11
	LFS indicators	LFS indicators and control variables	LFS indicators, control variables, protective factors, & risk factors
Beginner English	-0.87***	-0.78***	-0.51***
(1 = yes)	(0.17)	(0.17)	(0.16)
Schooling gap	-0.29	-0.18	-0.07
(1 = yes)	(0.20)	(0.19)	(0.17)
Low L1 literacy	-0.75***	-0.68***	-0.65***
(1 = yes)	(0.21)	(0.20)	(0.18)
Parental education		0.04**	0.03*
(0-26 years)		(0.02)	(0.01)
Age		-0.13*	-0.18***
(14-21 years)		(0.05)	(0.04)
Pedagogical caring			0.16
(1 = sd; 4 = sd)			(0.18)
Social integration			-0.04
(1 = sd; 4 = sd)			(0.12)
# of ESOL classes 2011-12			-0.32***
(0-5)			(0.05)
Out-of-school help			-0.04
(1 = sd; 4 = sd)			(0.07)
# of extra-curricular activities			0.13*
(0-4)			(0.06)
Traumatic experiences			0.03
(1 = sd; 4 = sd)			(0.09)
Social distance			0.18
(1 = sd; 4 = sd)			(0.12)
Adjusted R^2	0.22	0.29	0.47

Note. Greater numbers for protective factors imply greater advantages while greater numbers for risk factors imply greater disadvantages. sd = strongly disagree and sa = strongly agree. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Model 11 on Table 32 shows estimates for each LFS indicator, each important protective or risk factor, and each control variable (*parental education* and *age*) when all other variables in the model are held constant. Of the protective and risk factors, only *the number of ESOL classes* and *the number of extra-curricular activities* had significant associations with *English proficiency 2012*. For each ESOL class students

took, *English proficiency 2012* was 0.32 points lower (β = -0.44). For each extra-curricular activity, *English proficiency 2012* was 0.13 points higher (β = 0.14).

After controlling for covariates, including controls, risks and protective factors, the negative associations between *English proficiency 2012* and the two LFS indicators, *beginner English* and *low L1 literacy*, remained statistically significant, although the magnitude of the coefficient decreased by 0.35 points (40%) for *beginner English* and 0.10 (13%) points for *low L1 literacy*.

Multivariate estimates with English gain 2011-12. Model 12 on Table 33 shows estimates for each LFS indicator when the others are held constant. Only *low L1 literacy* had a marginally significant (p = 0.07) association with *English gain 2011-12*. Students who had arrived with low L1 literacy had *English gain 2011-12* scores that were 0.33 points lower than those who had not (β = -0.16). When control variables were included in the model, as in Model 13, the associations with the LFS indicators remained unchanged. Neither *parental education* nor *age* was significantly associated with *English gain 2011-12*.

Model 14 on Table 33 shows estimates for each LFS indicator, control variable and protective or risk factor when the other variables in the model are held constant. Of all the protective and risk factors, only *the number of ESOL classes* had a significant association with *English gains 2011-12*. For each ESOL class students took, *English gains 2011-12* were 0.12 points higher (β = 0.25). In Model 14, when protective and risk factors were introduced and held constant, the association for the LFS indicators was unchanged.

In sum, we once again see that ESOL classes were associated with lower English proficiency (see Table 32) but faster English learning (see Table 33), while extra-curricular activities were associated with higher English proficiency (see Table 32), but not with faster English learning (see Table 33).

Table 33

Multiple Regression Estimates for English Gain 2011-12 (n = 127)

	Model 12	Model 13	Model 14
	LFS indicators	LFS indicators and control variables	LFS indicators, control variables, protective factors, & risk factors
Beginner English	-0.16	-0.19	-0.22
(1 = yes)	(0.15)	(0.15)	(0.17)
Schooling gap	-0.10	-0.13	-0.16
(1 = yes)	(0.16)	(0.17)	(0.17)
Low L1 literacy	-0.33†	-0.34†	-0.35†
(1 = yes)	(0.18)	(0.18)	(0.18)
Parental education		-0.01	-0.01
(0-26 years)		(0.01)	(0.01)
Age		-0.04	-0.02
(14-21 years)		(0.04)	(0.04)
Pedagogical caring			0.19
(1 = sd; 4 = sa)			(0.19)
Social integration			0.13
(1 = sd; 4 = sa)			(0.13)
# of ESOL classes 2011-12			0.12*
(0-5)			(0.05)
Out-of-school help			-0.06
(1 = sd; 4 = sa)			(0.07)
# of extra-curricular activities			0.03
(0-4)			(0.06)
Traumatic experiences			-0.09
(1 = sd; 4 = sa)			(0.09)
Social distance			0.03
(1 = sd; 4 = sa)			(0.12)
Adjusted R^2	0.02	0.01	0.05

Note. Greater numbers for protective factors imply greater advantages while greater numbers for risk factors imply greater disadvantages. sd = strongly disagree and sa = strongly agree. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Multivariate estimates with HSA scores. Model 15 on Table 34 shows estimates for each LFS indicator when the others are held constant. *Beginner English*

had a significant negative association with *HSA scores*, and *schooling gap* had a marginally significant negative association (p = 0.10). Students who had arrived with beginner English had *HSA scores* that were 0.41 points lower than those who had not (β = -0.21). Students who had arrived with schooling gaps had *HSA scores* that were 0.36 points lower than those who had not (β = -0.16).

Table 34

Multiple Regression Estimates for HSA Scores 2011-12 (N = 116)

	Model 15	Model 16	Model 17
	LFS indicators	LFS indicators and control variables	LFS indicators, control variables, protective factors, & risk factors
Beginner English	-0.41*	0.00	0.01
(1 = yes)	(0.19)	(0.17)	(0.18)
Schooling gap	-0.38†	-0.25	-0.28
(1 = yes)	(0.21)	(0.18)	(0.19)
Low L1 literacy	-0.22	0.11	0.13
(1 = yes)	(0.23)	(0.20)	(0.20)
Parental education		0.03*	0.04*
(0-26 years)		(0.02)	(0.02)
Age		0.00	0.01
(14-21 years)		(0.05)	(0.05)
English Proficiency 2012		0.46***	0.53***
(1-6)		(0.09)	(0.10)
Pedagogical caring			-0.09
(1 = sd; 4 = sa)			(0.20)
Social integration			-0.18
(1 = sd; 4 = sa)			(0.13)
# of ESOL classes 2011-12			0.05
(0-5)			(0.07)
Out-of-school help			0.04
(1 = sd; 4 = sa)			(0.08)
# of extra-curricular activities			-0.01
(0-4)			(0.07)
Traumatic experiences			0.01
(1 = sd; 4 = sa)			(0.10)
Social distance			-0.30*
(1 = sd; 4 = sa)			(0.14)
Adjusted R^2	0.07	0.35	0.35

Note. Greater numbers for protective factors imply greater advantages while greater numbers for risk factors imply greater disadvantages. sd = strongly disagree and sa = strongly agree. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Model 16 on Table 34 shows estimates for each LFS indicator after controlling for covariates (*parental education*, *age*, and *English proficiency 2012*). After controlling for covariates, the associations between the two LFS indicators (see Model 15) lost significance, indicating that the two control variables (*parental education* and *English proficiency 2012*) had mediated the association between the LFS indicators and *HSA scores*. In other words, the HSA scores for students who had arrived with schooling gaps or beginner English depended largely on their parents' levels of education and their English proficiency when they took the HSA. Model 16 also shows that *parental education* and *English proficiency 2012* had significant positive associations with *HSA scores*.

Model 17 on Table 34 shows estimates for each LFS indicator, control variable (*parental education* and *age*), and protective or risk factor when the other variables in the model are held constant. Of all the protective and risk factors included in the model, only *social distance* was significantly associated with *HSA scores*. For each point of *social distance*, *HSA scores* was 0.30 points lower ($\beta = -0.15$).

4.5. The Mediating or Moderating Role of Academic Self-Concept in the Relationship between Protective and Risk Factors and Educational Outcomes.

The fifth research question in this study was "How does academic self-concept moderate or mediate the relationship between protective and risk factors and the educational outcomes of ELs in Rainbow County?" Previous research on educational resilience in at-risk students has claimed that academic self-concept is key to the resilience process (Gordon Rouse, 2001). To investigate whether the

importance of academic self-concept is important for resilience in EL students in this sample, I conducted analyses to determine whether *academic self-concept* had mediated or moderated the relationships between the protective or risk factors and the educational outcomes.

4.5.1. The Moderating Effect of Academic Self-Concept on ELs' Academic Achievement.

The term "moderation" in statistics is used to describe a relationship in which the association between two variables depends on the strength of a third variable, called a moderator (Aiken & West, 1991; Pedhazur, 1997; Howell, 2013; Allison, 1999; Jaccard, Turrisi, & Wan, 1990). This study hypothesized that *academic self-concept* plays a moderating role in the relationship between the protective or risk factors and the educational outcomes for SLIFE. In other words, I hypothesized that the effect of the protective and risk factors depended on students' academic-self concept. The findings presented here are for analyses including all ELs, not just SLIFE, so the estimates might be different if we were able to conduct analyses exclusively with SLIFE students.

Table 35 shows estimates of the role *academic self-concept* played in moderating the relationship between *social distance* and *HSA scores*. In Model 20 we can see that the interaction variable for *academic self-concept* and *social distance* has a marginally significant association with *HSA scores* ($p = 0.07$). Therefore, we have some evidence here that *academic self-concept* moderated the relationship between *social distance* and *HSA scores*.

Similar analyses were conducted for every protective, risk, and other important factor in the study, none with any control variables included, but these are

not shown here in the interest of space, especially considering that they showed no significant findings.

Table 35.

Estimates for Moderation of the Relationship between Social Distance and HSA Scores by Academic Self-Concept (N = 127)

	Model 18	Model 19	Model 20
Social distance (centered)	-0.13	-0.10	-0.07
	(0.16)	(0.16)	(0.16)
Academic self-concept (centered)		0.26	-0.01
		(0.28)	(0.31)
Interaction between the two variables			0.78†
			(0.42)

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

In sum, in these exploratory analyses without control variables, I found no evidence that *academic self-concept* had influenced the strength of any of the factors except in the case of *social distance* and *HSA scores*. This may be due to the fact that few of the risk and protective factors showed any relationships to the educational outcomes. This was true for all three educational outcomes: *English proficiency 2012*, *English gain 2011-12*, and *HSA scores*.

4.5.2. The Mediating Effect of Academic Self-Concept on ELs' Academic Achievement.

The term "mediation" in statistics is used to describe a relationship in which the association between two variables is actually an indirect effect caused by the influence of a third variable, or mediator (Sobel, 1986; Baron & Kenny, 1986). This study hypothesizes that *academic self-concept* plays a mediating role in the relationship between the protective or risk factors and the educational outcomes for

SLIFE. In other words, the relationship between two variables can actually be explained by a third variable which is associated with both. The analyses presented here were conducted including all ELs, not just SLIFE, so the estimates might be different if we were able to conduct them exclusively for SLIFE. A separate analysis was conducted for each risk, protective, and other important factor, but only marginal mediation was found when examining the association between the dependent variable, *English proficiency 2012*, and two independent variables: *social integration* and *extra-curricular activities*. None of the models introduced control variables. Tables 36 and 37 include results from mediation analyses for *social integration* and *the number of extra-curricular activities*.

As Table 36 shows, *academic self-concept* marginally mediated the relationship between *social integration* and *English proficiency 2012*. There were significant associations between *academic self-concept* (mediator) and *social integration* (independent variable, see Model 21), and between *social integration* and *English proficiency 2012* (see Model 22). These significant associations are prerequisites for mediation (Baron & Kenny, 1986). Model 23 indicated that when both variables, *social integration* and *academic self-concept*, were included in the model, they became marginally significant. A Sobel test, which is a very conservative test for mediation, showed the p value for the mediation was not significant ($p = 0.16$; Sobel, 1982). In conclusion, academic self-concept may partially explain why social integration was associated with English proficiency 2012, but there was not clear evidence that such a mediating relationship existed.

Table 36

Multivariate Regression Estimates for Mediation Effect of Academic Self-Concept between Social Integration and English Proficiency 2012

	Model 21	Model 22	Model 23
	Association between mediator and IV	Association between IV and DV	Association between mediator with the IV and DV
Social integration (1-4)		0.30*	0.26†
		(0.14)	(0.14)
Academic self-concept	0.40**		0.47†
(1-4)	(0.16)		(0.28)
Adjusted R^2	0.03	0.02	0.03

Note. Scales used to measure social integration and academic self-concept used Likert-type responses in which 1 = "Strongly disagree," 2 = "Disagree," 3 = "Agree," and 4 = "Strongly agree." Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

Table 37 shows findings similar to those in Table 36 but focuses on the mediating role of *academic self-concept* in the relationship between *the number of extra-curricular activities* and *English proficiency 2012*. In this case, the evidence indicates also a marginal mediation for *academic self-concept,* but once again, a Sobel test shows no statistical significance for the mediation. Therefore, academic self-concept may help explain why extra-curricular activities were associated with English proficiency, but we lack strong evidence.

In sum, no strong evidence of mediating relationships was found. This may have been largely due to the fact that *academic self-concept* was only significantly associated with one of the educational outcomes: *English proficiency 2012*.

Table 37

Multivariate Regression Estimates for Mediation Effect of Academic Self-Concept between the Number of Extra-curricular Activities and English Proficiency 2012

	Model 24	Model 25	Model 26
	Association between mediator and IV	Association between IV and DV	Association between mediator with the IV and DV
# of extra-curricular activities (0-4)		0.14* (0.07)	0.13† (0.07)
Academic self-concept (1-4)	0.40** (0.16)		0.49† (0.28)
R^2	0.03	0.02	0.03

Note. Unstandardized coefficients are shown with their standard errors in parentheses. Statistically significant findings are identified as follows: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. † indicates marginal significance with $p \leq .1$

4.6. Summary of the Findings

This study found that the indicators of LFS (*schooling gaps*, *beginner English*, and *low L1 literacy*) were common among the ELs in the sample from Rainbow County high schools, but that some of the indicators were much more common than others. About 60% of the students had arrived with beginner-level English, while only 22% had gaps in their grade-relative schooling or low L1 literacy on arrival. Overall, 27% of the students were identified as SLIFE based on having two or more of these three indicators.

The prevalence of protective factors tended to be high for the students in this study while the prevalence of risk factors tended to be low. Students reported very high levels of academic self-concept and pedagogical caring. In fact, because students' academic self-concept was so high and had so little variability, it was difficult to estimate the relationship between academic self-concept and other variables.

Certain risk or protective factors were found to be more or less prevalent in the SLIFE subgroup than in the non-SLIFE subgroup. For example, SLIFE took more ESOL classes than non-SLIFE but had lower academic self-concepts and perceived less pedagogical caring. SLIFE spent fewer hours working at employment than non-SLIFE. There were other important differences than just the risk and protective factors, however. For example, the parents of SLIFE had lower levels of education than those of non-SLIFE.

Bivariate analyses showed that the protective and risk factors had little effect on the educational outcomes in this study, and there were few differences in those effects between SLIFE and non-SLIFE. One of the few interesting differences was with traumatic experiences. SLIFE that had high scores on *traumatic experiences* were significantly more likely to have lower *English gains 2011-12*, and this pattern was not evident for non-SLIFE. For both SLIFE and non-SLIFE, *the number of ESOL classes* had a strong and significant negative association with *English proficiency 2011-12* and *HSA scores*, but a positive one for *English gains 2011-12*. In other words, students taking more ESOL classes had lower English proficiency but made greater gains.

Bivariate analyses also found that the three LFS indicators (*beginner English*, *low L1 literacy*, and *schooling gaps*) had significant negative associations with *English proficiency in 2012*, but not with *English gain 2011-12*. Bivariate analyses also showed that only *schooling gaps* and *beginner English* had significant negative associations with *HSA scores*, but controlling for *English proficiency 2012* revealed

that the negative associations were largely due to their having lower English proficiency when they took the HSA.

The LFS indicators were combined to form one dummy variable that identified students with two or more of the three indicators. This variable was called *SLIFE*. In bivariate analyses, there was a significant negative association between *SLIFE* and both *HSA scores* and *English proficiency 2012* as well as a marginally significant negative association with *English gains 2011-12*. The bivariate estimates with the *SLIFE* variable suggest that having more than one of the LFS indicators at a time puts students at greater risk for slower English learning. Much of the negative association between SLIFE and HSA scores was explained by schooling gaps and lower English proficiency, however.

Multivariate analyses lent more understanding to what was found in bivariate analyses. Multivariate analyses with the educational outcome, *English proficiency 2012*, indicated that students who had arrived with the LFS indicators, *beginner English* and *low L1 literacy,* were likely to still have lower English proficiency at a later date (as indicated by scores in *English proficiency 2012*). Older students and those taking more ESOL classes had lower English proficiency in 2012, but students involved in more extra-curricular activities had higher proficiency. Multivariate analyses with the educational outcome, *English gains 2011-12*, indicated that the only LFS indicator that had even a marginally significant association with students' rate of English language acquisition was *low L1 literacy,* but ESOL classes appeared to help all ELs learn English faster. Multivariate analyses with the educational outcome, *HSA scores*, indicated that ELs who had arrived with the two LFS indicators,

beginner English and *schooling gap*, were more likely to have lower *HSA scores* in 2012, but this was almost entirely explained by differences in *parental education* and their English proficiency at the time of the HSA (*English proficiency 2012*). Students who perceived a higher social distance had lower *HSA scores,* even though they had higher *English proficiency 2012*.

Multivariate analyses did not reveal many of the expected mediation or moderation effects for academic self-concept. *Academic self-concept* played a marginally significant moderating role in the association between *social distance* and *HSA scores*. *Academic self-concept* played marginally significant mediating roles with *English proficiency 2012* and two other variables: *social integration* and *extra-curricular activities*. The lack of significant moderating and mediating effects may be attributed to the lack of association between academic self-concept and the educational outcomes or the protective and risk factors and the educational outcomes.

These findings reveal some interesting phenomena with the variable, *length of residence*, that I attribute to "the accumulation effect" (see methods page 121). Even though students who had been in the U.S. school system longer had higher English proficiency, and higher English proficiency generally predicted higher HSA scores, longer length of residence was associated with lower HSA scores instead of higher HSA scores as one might predict. This seeming contradiction might have an easy explanation. Students with longer lengths of residence were also students that had spent more time in the U.S. without meeting state English proficiency standards. Many students who had arrived in the U.S. at the same time had already met state proficiency standards and were not included in the county's list of English learners

from which the sample was drawn. Students with longer lengths of residence were learning English more slowly on average and were more likely to have arrived with lower English proficiency. Other researchers have identified a type of EL they refer to as a "long-term English learner" (Flores, Batalova, & Fix, 2012; Freeman, Freeman, & Mercuri, 2002). This study supports their claims that many SLIFE become long-term English learners because of their lower English proficiency on arrival and slower rate of learning. This is an important because low English proficiency was strongly associated with lower HSA scores, and having low English proficiency longer meant being more at-risk for lower HSA scores longer. This was serious because passing the HSAs was a graduation requirement.

In sum, SLIFE were more at-risk for lower educational outcomes, but much of the difficulty was related to English proficiency. SLIFE learned English slower, especially if they had arrived with low L1 literacy and had experienced traumatic events. Taking more ESOL classes appeared to help ELs learn English faster, which was very important for academic achievement measured by HSA scores. Students with low English proficiency had lower HSA scores, as did students who perceived higher social distance.

Chapter 5: Discussion.

5.1. Introduction.

This dissertation utilized a quantitative approach to examine educational resilience among high school English learners (ELs) with limited formal schooling (LFS), also known as students with limited or interrupted formal education, or SLIFE (DeCapua, Smathers, & Tang, 2010). Students were identified as SLIFE if they had two out of three LFS indicators on arrival in the U.S. Those indicators were gaps in the years of schooling attendance, low first language literacy, and beginner-level English proficiency. This study used school system and student survey data from 165 high school students classified as ELs in order to understand how having arrived with LFS affected their educational outcomes and the role school-based protective and personal risk factors played in their resilience or vulnerability in overcoming LFS. This study also examined the role the students' academic self-concept played in mediating or moderating the school-based protective and personal risk factors in the resilience process. The school-based protective factors included pedagogical caring, ESOL classes, social integration, extra-curricular activities, and out-of-school help. The personal risk factors included traumatic experiences, separations from caretakers, social distance, negative peers, a lack of authoritative parental supervision, and hours spent working in employment.

In this section I summarize the findings of this study and offer my interpretations. I also discuss applications of the findings for educators and policy

makers. Finally, I discuss the limitations of this study and suggest directions for future research.

5.2. Main Findings.

Four main findings emerged from this study. First, students identified as SLIFE experienced important educational disadvantages, but some SLIFE were educationally resilient in that they eventually achieved English proficiency and on-grade-level academic achievement. Specifically, compared to non-SLIFE, SLIFE had lower English proficiency, slower rates of English learning, and lower academic achievement measured by test scores. On average, the achievement differences between SLIFE and non-SLIFE were not always very strong or significant, however, indicating that resilience among SLIFE was common. Second, for both SLIFE and non-SLIFE, protective factors tended to be very prevalent while risk factors tended to be rare, but there were important differences in the prevalence of these factors between SLIFE and non-SLIFE. For example, both SLIFE and non-SLIFE reported very high academic self-concepts. Also, very few SLIFE or non-SLIFE reported a lack of authoritative parenting. SLIFE, however, compared to non-SLIFE, reported lower academic self-concepts, pedagogical caring, and social integration but took more ESOL classes. Third, educational resilience among SLIFE appeared to be largely related to the LFS indicators, especially English proficiency and L1 literacy, or to demographic characteristics such as parental education, but some protective and risk factors played important roles. In particular, the number of ESOL classes was significantly associated with higher English gains, and therefore, appeared to be an important school-based protective factor for educational resilience. However,

students perceiving higher social distance had lower academic achievement measured by HSA scores. Fourth, this study found that low L1 literacy was not well correlated with the other two LFS indicators on arrival: beginner English and schooling gaps. This last finding raises important questions about how students are identified as SLIFE and what services they are given.

5.2.1. Educational Outcomes.

This study supports claims that SLIFE are more at risk for academic failure than other ELs (Thomas & Collier, 2002; Greenberg, Macias, Rhodes, & Tse, 2005; Office of English Language Learners, New York City Department of Education, 2009; Suarez-Orozco, et al., 2010; Ruiz-de-Velasco & Fix, 2000; Advocates for Children of New York, 2010; Siu, 1996), but it also supports claims that they have the potential to eventually attain on-grade-level academic outcomes if they are supported well (Short, Boyson, & Coltrane, 2003; Walsh, 1999; Zehr, 2009). This study found that SLIFE could achieve HSA scores that were not too dissimilar from those of non-SLIFE if they had enough English proficiency when they took the test, and although SLIFE took longer to gain enough English proficiency, many did gain enough given time and support.

Similar to Thomas & Collier's (2002) study on English learners, this study found that the rate of English acquisition was slower for SLIFE than other ELs. The effect of LFS on English language learning as indicated by the *SLIFE* dummy variable was not very strong or significant, however. The SLIFE in this study had English proficiency gains that were 0.23 points lower than the non-SLIFE over the course of the 2011-12 school year, but the difference between SLIFE and non-SLIFE was only marginally significant ($p = 0.10$) and the standardized coefficient ($\beta = -0.15$)

indicated that the effect of the SLIFE variable was not strong. Nevertheless, SLIFE took longer to become English proficient on average, so they were likely to remain classified as ELs longer. This confirms research stating that SLIFE are more likely to become long-term English language learners (Menken & Klein, 2009).

Multiple regression analyses using the individual LFS indicators instead of the *SLIFE* dummy variable helped explain why SLIFE were learning English slower than non-SLIFE. When other variables were held constant, *low L1 literacy* was the only LFS indicator that continued to have even a marginally significant association with *English gain 2011-12*. In other words, the slower English learning for SLIFE may be entirely due to SLIFE having arrived with low L1 literacy, not missing years of schooling. Supplementary analyses showed that the harmful effect of low L1 literacy was even stronger in cases when the L1 literacy was even lower. These findings confirm other research claiming the ELs with low L1 literacy learn English more slowly (Garrison-Fletcher, et al., 2008; Thomas & Collier, 2002; Dufva & Voeten, 1999) as well as the claims that language learning differences between more schooled and less schooled individuals may be attributed largely to L1 literacy differences (Kurvers, Stockmann, & van de Craats, 2010; Robson, 1983).

This study also supports claims that SLIFE tend to have lower scores on standardized tests of academic content such as algebra or biology (Office of English Language Learners, New York City Department of Education, 2009). In this study, SLIFE had scores on standardized tests of academic achievement (called high school assessments, or HSAs) that were 0.65 deviations lower than the scores of non-SLIFE. That indicates a very serious disadvantage.

A closer examination using multiple regression analysis, however, showed that the lower standardized scores for SLIFE were largely due to their lower English proficiency at the time they took the test. As arriving with beginning-level English proficiency was one of the LFS indicators in this study, the SLIFE tended to have lower English proficiency on arrival than those of the non-SLIFE. Even if they learned English at a rate similar to non-SLIFE, they were more likely to still have lower English proficiency when they eventually had to take the HSAs. In cases when SLIFE had English proficiency similar to non-SLIFE, their disadvantages on HSAs were no longer statistically significant. These findings support claims that SLIFE can overcome disadvantages and eventually perform on grade level if they acquire enough academic English (Short, Boyson, & Coltrane, 2003; Walsh, 1999; Zehr, 2009).

5.2.2. Prevalence of Protective and Risk Factors.

For both SLIFE and non-SLIFE, protective factors tended to be very prevalent while risk factors tended to be rare, but there were important differences in the prevalence of these factors between SLIFE and non-SLIFE. For example, both SLIFE and non-SLIFE reported very high academic self-concepts. Very few SLIFE or non-SLIFE reported any lack of authoritative parenting. SLIFE, however, reported lower academic self-concepts, pedagogical caring, and social integration than non-SLIFE but took more sheltered ESOL classes.

5.2.3. Educational Resilience among SLIFE.

This study attempted to do more than just estimate the disadvantages that SLIFE must overcome; it attempted to understand educational resilience among SLIFE. Educational resilience is defined as overcoming a risk-factor that might

normally predict lower educational outcomes (Luthar, Cicchetti, & Becker, 2000). The theoretical framework to explain educational resilience in this study was Motivational Systems Theory (Ford, 1992) as applied by Kimberly Gordon Rouse (2001). Gordon Rouse attributes educational resilience to interactions between students' school environments and their academic self-concept. Academic self-concept is a measure that combines students' educational goals, attitudes, and beliefs.

There were only a few notable findings for moderation and mediation effects with academic self-concept, however. For example, the relationship between social distance and HSA scores appeared to be moderated by academic self-concept. In other words, the harmful influence that students' perceptions of social distance had on their HSA scores appeared to depend to some degree on their academic self-concepts. The relationship between social integration and English proficiency also appeared to be somewhat mediated by academic self-concept as did the relationship between extra-curricular activities and English proficiency. It may be the academic self-concept explains the higher English proficiency associated with higher levels of social integration and extra-curricular activities, or it may be the other way around.

Nevertheless, the findings from this study do not support the theory that educational resilience for SLIFE comes largely from academic self-concept, at least not as it was measured by the survey items. While academic self-concept, specifically beliefs about the value of education, may explain why recent-arrival immigrants do better than native-born students after controlling for disadvantages such as LEP, academic self-concept may not explain why some recent-arrival immigrants do better than other recent-arrival immigrants. For the most part, nearly

all the students in this study had very high academic self-concepts, but their educational outcomes suggested they were not affected by it in the same way.

The lack of effect, or variability of effect, for academic self-concept may be due to the fact that SLIFE are unlike other at-risk students who are U.S. citizens and native speakers of English without interruptions in their formal schooling. SLIFE have some very real disadvantages they must first overcome, and to do so, rely much more on school support. Without that support, a positive attitude probably has limited benefits. The SLIFE in this study also seemed to be very well supported and nearly all had very positive academic self-concepts. The lack of variability in responses may have made it more difficult to identify the role their academic self-concepts had played in influencing their educational outcomes.

This study had three findings that suggest resilience among SLIFE depends largely on the indicators of limited formal schooling itself: grade-relative schooling, English proficiency, and L1 literacy. First, ELs with higher L1 literacy on arrival learned English faster than those with lower L1 literacy on arrival. Second, ELs were more likely to pass the HSA if they had higher English proficiency at the time of the test. Third, once ELs had gained the English proficiency needed to pass the HSAs, those who had arrived with larger gaps in grade-relative schooling continued to have lower HSA scores. Those three findings imply that SLIFE needed to overcome the LFS indicators they had arrived with in order to have educational resilience. The next question is, "What factors helped them overcome those disadvantages?"

One demographic factor that appeared to help SLIFE overcome the disadvantages of the LFS indicators was parental education. Higher parental

education was significantly associated was higher HSA scores for all ELs; the association was even stronger for SLIFE than for non-SLIFE. In other words, SLIFE with more educated parents performed better on HSAs than those with less educated parents. Although parental education was negatively correlated with being a SLIFE, analyses showed that the two functioned independently of one another. It seems that parents with more schooling could somehow help students have higher academic achievement. It may be that out-of-school learning with those parents was important (Schultz & Hull, 2002; Lave & Wenger, 1991).

In accordance with Motivational Systems Theory (Ford, 1992; Gordon Rouse, 2001), students' school environments were shown to influence their educational outcomes. School support was shown to play an important role, as the most significant school-related protective factor in this study was ESOL classes. This study supports claims that ESOL classes help ELs learn English faster (Nykiel-Herbert, 2010; Thomas & Collier, 2002; Callahan, Wilkinson, Muller, & Frisco, 2009). This was important for SLIFE resilience because English was essential for academic achievement.

Although academic self-concept did not show any significant associations with the educational outcomes for the ELs in this study, social distance, a measure more specific to language learning and the immigrant context, did in a surprising way. Interestingly, high social distance was not associated with slower English language learning as researchers would predict (Schumann, 1976), but it was associated with lower HSA scores after controlling for the influence of English proficiency. Social distance, with its emphasis on how immigrant students feel

connected to or disconnected from mainstream "American" society, might be a more useful predictor of educational outcomes for ELs than the standard academic self-concept measure. According to Schumman (1976), high social distance includes one's belief that one will not stay in the U.S. a long time, that one's homeland culture is superior to American culture, and that Americans look down on immigrants. Other researchers have argued that the perceived prejudice and discrimination associated with social distance causes students to feel they lack reasons to invest in their U.S. schooling (Alva, 1993). If they feel that discrimination against immigrants will cause them to face limited opportunities after they complete high school, and that education will have diminished economic benefits for them because of it, then they may be less motivated to do well in school, despite having positive beliefs about education itself.

On the contrary, this study found positive social integration with "American" peers at school had no significant positive association with HSA scores after controlling for other powerful factors such as students' English proficiency at the time of the test (in fact there was a negative association, albeit not a significant one). There was also no evidence in this study that positive social integration with mainstream "American" peers helped ELs learn English. Students reporting more social integration and participating in more extra-curricular activities had higher English proficiency, but they were not learning English faster than other students. It may be that students' integration is facilitated by their language learning, not the other way around. This seems to differ from the resilience process described by Motivational Systems Theory and suggests that the resilience process for the ELs in

this study, who were recent-arrival immigrants, may be different from that of non-immigrant students.

Some of these findings may be explained by Portes and Zhou's theory of Segmented Assimilation (1993). Portes and Zhou's research shows that immigrant youth follow different paths of assimilation depending on various factors in their lives, such as race, neighborhood, or the existence of economic opportunities within their immigrant communities. They argue that assimilation can lead to either positive or negative educational outcomes depending on what group immigrant children assimilate into. If immigrant children assimilate into a group that is oppositional to education, then such assimilation will lead to lower educational outcomes instead of higher ones. Portes and Zhou's research also shows that the parents of immigrant children often have high educational expectations for their children and plans for their children's upward economic mobility. Assimilation can be harmful if it disrupts immigrant children's' connection to their parents and their high educational expectations.

Although it may seem surprising that these two related concepts, social distance from mainstream "Americans" and social integration with "American" peers at school, would have conflicting associations with academic achievement, there are other studies that have also found these two variables have different implications for high school ELs than we might expect (Medvedeva, 2010). I would suggest that, when students perceives that they are looked down upon by society at-large, being embraced by "American" peers who are oppositional to education, and possibly

feeling motivated to conform to their norms, may not help, but may in fact hurt educational outcomes.

5.2.4. Issues with the Construct of LFS.

This study found that the construct of limited formal schooling as it is described in much of the literature and as it was operationalized in this study is problematic because it confounds schooling (time spent in school) with education (what is usually learned in school). Some researchers point out that education, especially literacy, is often acquired outside of school (Schultz & Hull, 2002; Lave & Wenger, 1991; Scribner & Cole, 1978). This might explain why parental educational levels had an influence on student educational outcomes in this study, even after the other indicators of limited formal schooling were held constant. Besides out-of-school learning, the amount a student learns from a year spent in school can vary from student to student. Some students learn faster than others, sometimes because they try harder, and sometimes because they have more advantages or support. Likewise, the amount a student learns in a year of school can vary from country to country. Some countries provide much more adequate schooling than others (Flaitz, 2006). In some countries, the hours of public school are longer, the teachers are more qualified, and the schools are more well-resourced, leading to higher learning outcomes for their students.

In this study, when the LFS indicators were combined to create a scale to identify SLIFE, the scale was found to be unreliable because low L1 literacy on arrival was not significantly correlated with schooling gaps on arrival. Students with schooling gaps were not more likely to have low L1 literacy than students without those gaps. Some might argue that this lack of correlation may have been due to

inaccurate data or wrong measures, but other studies have made the same discovery (Robson, 1983; Tarone, 2010). In sum, this study and others provide evidence against the validity of a construct of LFS that confounds schooling and education. Specifically, it appears to be unsound to assume that students with gaps in their grade-relative schooling are more likely to have L1 literacy issues, and vice versa.

It is also important to repeat for emphasis that each LFS indicator had different, unrelated, yet compounding effects on the educational outcomes used in this study. Students who arrived with lower English skills had lower English later because they had started farther behind. Students who had arrived with low L1 literacy learned English more slowly. Students with low English at the time they took the HSA, had lower test scores. Students who had arrived with schooling gaps continued to have lower HSA scores even when the effect of English proficiency was held constant. Each of these is a very different learning issue, but when combined, these work together to act as a serious risk factor. For this reason, the term SLIFE has special meaning, even if it represents a problematic construct.

5.3. Implications for Educational Policy and Practice.

The lower educational outcomes for SLIFE represent a challenge for U.S. school systems. This study shows that SLIFE can be educationally resilient, and school support is vital to their resiliency. In this section, I will discuss how school systems identify SLIFE, what sort of interventions may benefit SLIFE, and issues of accountability for schools and teachers that serve SLIFE.

5.3.1. Identifying SLIFE.

In order to provide appropriate services, we must first learn how to identify those who need them. In New York State, SLIFE are identified for services solely

based on self-reported gaps in previous formal schooling attendance (New York State Department of Education, 2011).[43] This is inappropriate since researchers and advocates have warned that students and their families may not be willing to disclose those gaps to administrators when they first arrive (Abedi, 2008; Advocates for Children, 2008). Moreover, using schooling gaps as the only qualifier for SLIFE services means that students who do not have schooling gaps but have low education and literacy will not be served (Advocates for Children of New York, 2010). This study and others show that students can have literacy and education without schooling and vice versa (Schultz & Hull, 2002; Lave & Wenger, 1991; Tarone, 2010; Robson, 1983; Scribner & Cole, 1978). Some students may also arrive functioning many years below grade-level in subjects such as math without ever having missed any schooling (DeCapua, Smathers, & Tang, 2007). I feel my data show that the lack of content knowledge, academic skills, and literacy is the real issue for SLIFE, not the lack of time spent in school.

Instead of just using self-reported schooling gaps to identify students in need of special services, school systems may want to consider testing all incoming ELs for specific educational issues such as low math skills, low scientific knowledge, and low L1 literacy. In this way, we would know how educated the newly-arrived ELs are, instead of just how many years of schooling they have. This might be a better way to determine whether a student needs special services and what sort of services to provide. In cases when previous formal schooling records indicate that a student has attended adequate quality schooling without interruptions, but that student has low

[43] The New York State Department of Education uses the term "student with interrupted formal education," or SIFE.

education and L1 literacy, school staff could begin collecting data to determine whether that student has a learning disability.

Designing such tests will be a daunting and expensive task for school systems, especially if each school system is charged with creating its own tests. This is especially true considering the diversity of students classified as EL in the U.S. Tests would need to exist written in many different languages, and systems would have to exist to administer those tests to students who cannot read in any language. Fortunately, states have started working together as consortiums to design tests for English learners.[44] Perhaps these same consortiums with their university partners can begin creating these new tests.

5.3.2. Interventions for SLIFE.

This study showed that SLIFE were taking longer to become proficient in English, and that limited English proficiency was associated with lower academic achievement as indicated by scores on standardized tests of academic content. School systems must have interventions to address this educational inequality. But, what kinds of interventions are most appropriate?

Interventions for SLIFE, like those for other ELs, can either follow a segregated model or an inclusion model. In a segregated model, the students are placed in a special program with classes only for SLIFE (Francis, Rivera, Lesaux, Kieffer, & Rivera, 2006). The ultimate example of such a program is a newcomer center specially designed for SLIFE (Short , 2002). These programs can have some advantages for SLIFE but are controversial because they segregate them from native-

[44] The WIDA consortium that designs the English proficiency tests used in many states is an example of this.

speaker American students. Mainly for this reason, some prefer an inclusion model in which SLIFE are placed in "regular" high school classes with "regular" American students but supported for their special needs. The assumption is that the inclusion model benefits SLIFE by providing opportunities for interaction with native-speakers of English and a less restrictive environment. This study shows no evidence, however, that social integration with mainstream American students helps ELs learn English faster. In fact, if ESOL classes, which have been shown to help students learn English faster, were removed in favor of more social integration, harm might be done. Furthermore, SLIFE especially may require educational services that they will not receive in inclusion.

A potential problem with newcomer programs for SLIFE is that they group together students who are low-literacy, low-educated, and limited English proficient in a one-size-fits all program without acknowledging the differences involved with each of these disadvantages. This study shows that these are actually separate and different learning issues. An EL may have one or more of these issues without having all three. For example, a student may have schooling gaps without having low L1 literacy or academic skills. That student will not need the same services a student with very low L1 literacy and academic skills might need. As they are separate learning issues they may need to be addressed through different interventions.

One intervention commonly provided for ELs is ESOL classes. This study and others show that providing more ESOL classes to SLIFE can help them learn English faster so they can succeed in school (Nykiel-Herbert, 2010; Callahan, Wilkinson, & Muller, 2010; Thomas & Collier, 2002; Flores, Batalova, & Fix, 2012).

The ESOL classes in this study were classes exclusively for ELs and could therefore be contrasted with inclusion. This study did not, however, differentiate for the various types of ESOL instruction offered by the county. The courses that were counted for the ESOL courses variable ranged from newcomer courses that focused on basic English skills to sheltered ESOL courses based on grade-level academic content. The findings suggest such courses may be effective practices for ELs but provide no information about which model was more effective for which type of student.

Some have suggested that ESOL classes would be more effective for low L1 literacy ELs if they were modified for their special learning needs (DeCapua, Smathers, & Tang, 2010; Crandall, Bernache, & Prager, 1998) or that special ESOL classes should even be created for low L1 literacy ELs (Bigelow & Schwarz, 2010). But, this study found that not all SLIFE lacked L1 literacy. Only 39% of the SLIFE in this study lacked L1 literacy. Therefore, such modifications may not be appropriate for all SLIFE. L1 literacy tests should be used to determine which ELs would benefit from such modified ESOL classes.

Some have suggested that low L1 literacy ELs might benefit from first language literacy instruction (Thomas & Collier, 2002; Chamot, 2000; Garrison-Fletcher, et al., 2008). Research shows that ELs with higher L1 literacy have advantages due to the transfer of L1 literacy skills to English literacy (August, 2006) and that low L1 literate ELs acquire English literacy faster when given L1 literacy instruction in addition to their regular ESOL instruction (August & Shanahan, 2006; Burtoff, 1985). For this reason, bilingual education programs might be preferable to

English-only ESOL programs. Bilingual education programs may also be a more efficient way for low-educated ELs to acquire the knowledge and skills they lack in math, science, and other content areas since, as this shows limited English proficiency is a barrier for ELs academic achievement. Some schools have reported success with offering bilingual education to SLIFE, instead of English-only programs (Tellez & Walker de Felix, 1993; Fast Buffalo Horse, 2007) although districts would need sufficient numbers of these students with the same language background.

This study shows lower scores for SLIFE on standardized tests of academic content. Some SLIFE may have unique disadvantages from having missed years of schooling. In some cases, it may just be missing prerequisite knowledge or skills in math or science, but in other cases it could be cognitive disadvantages. Some researchers have found that more schooled individuals could complete certain cognitive tasks faster than less-schooled ones (Scribner & Cole, 1978). For example, people who have spent time in school are better able to categorize objects (Brucki & Rocha, 2004) and appear to have better short-term memories (Ostrosky-Solis, Ramirez, Lozano, Picasso, & Velez, 2004). People with more previous formal schooling are also more capable of learning content independent of meaning and context (Tarone, Swierzbin, & Bigelow, 2006; Castro-Caldas, 2004), so they can learn from classroom instruction instead of direct experience. Simply put, experience with school learning makes future school learning easier (Bigelow & Schwarz, 2010) because it teaches students how to complete tasks that are required of them in school but that they are not likely to experience elsewhere (Lave & Wenger, 1991). For these reasons, some researchers have argued that SLIFE with very little previous

formal schooling need an instructional program that is specially adapted to accommodate their cultural differences and lack of school-oriented cognitive skills, while helping them close gaps in math and science content knowledge (DeCapua & Marshall, 2010).

Finally, another intervention for SLIFE might be adult basic education services for their parents. This study found that parental education appeared to be involved with educational resilience for SLIFE. Therefore, adult basic education programs that increase the educational levels of the parents of SLIFE could benefit the SLIFE as well as their parents. Perhaps programs could be designed in which the family members learn together.

5.3.3. Teacher and School Accountability.

It is important that schools and teachers that serve SLIFE not be inadvertently punished for having many students who are SLIFE. This is a real possibility if poorly implemented teacher and school accountability policies cause teachers and schools who serve large numbers of SLIFE to face consequences.

Perhaps the most famous example of schools being held accountable for the academic achievement of their students can be found in the legislation known as No Child Left Behind (U.S. Congress, 2002). Under this law, schools have been required to show that they have been making Adequate Yearly Progress (AYP) with their students classified as EL. For the AYP policy, schools must administer the same standardized tests of academic content to all students and then disaggregate the test scores by subgroups to determine what percentage of each subgroup met state standards. Those subgroups include groups of race/ethnicity (such as Whites and

Blacks), socio-economic groups (such as low income students), and groups with different abilities (such as students with learning disabilities and students classified as ELs). To show they are making AYP, schools must show that the percentage of students from each subgroup who are passing each test is becoming more similar, and that all subgroups are making progress toward eventual 100% proficiency. At the time of this study, the schools participating in this study were using the High School Assessments (HSAs) for Algebra, Biology, and 10th grade English to determine whether each group had met AYP (Maryland State Department of Education, 2014). If those schools do not show they are making AYP, they may lose federal funding and/or be taken over by an outside agency that would be authorized to dismiss the school staff (U.S. Congress, 2002).

It is extremely problematic that the AYP policy includes ELs as a subgroup because an EL population is different from other populations that are based on race/ethnicity or family income. Students are placed in the EL subgroup when their English proficiency test scores indicate that they do not meet state English proficiency standards (Maryland State Department of Education, 2013). Similarly, when ELs eventually meet those standards, they are removed from this subgroup. In this manner, some of the more successful ELs are not included in the EL data, and the less successful ELs accumulate from year to year distorting this group's data (Duran, 2008). This study and many others have found that students' scores on standardized tests of academic content are strongly influenced by their English proficiency (Gibson, 1988; Park, 2001; Flores, Batalova, & Fix, 2012; Abedi, 2008; Uro & Barrio, 2013; Office of English Language Learners, New York City Department of

Education, 2009; Batalova, Fix, & Murray, 2007; Crane, Barrat, & Huang, 2011). For this reason, I expect this subgroup will never show 100% proficiency using the current tests and is often unlikely to show progress.

The AYP policy is even more problematic for schools with large or increasing numbers of SLIFE because, as this and other studies show, they take longer to meet state English proficiency standards and accumulate in the EL population as long-term ELs (Menken & Kleyn, 2009). Having more SLIFE could cause schools to fail to make AYP obligations. I fear that under this policy some schools could be inadvertently punished for having more SLIFE.

More recently, President Barack Obama's educational initiative, known as Race to the Top, has added new systems of accountability, including systems to hold teachers accountable for their students' academic outcomes (U.S. Department of Education, 2010). Typical of Race to the Top, the state in which this study took place requires teachers to work with administrators to set objectives for their students and evaluates those teachers partially by how well their students meet those objectives (Maryland State Department of Education, 2014). When 90% or more of their students meet the objective by the end of the class, the teacher may be considered effective. These goals are negotiable and can be individual-student-progress oriented. So, for example, a goal for a group of ELs may be for 90% of them to improve their English proficiency test scores by one proficiency band.

These teacher and school accountability policies are good in that they exist to identify an educational inequality and try to force schools to remedy it. But, teachers and administrators must have the ability to identify SLIFE and then be enabled to

provide effective interventions for those SLIFE to meet accountability objectives that show high expectations but are attainable. If schools or teachers are punished when their SLIFE do not meet accountability objectives because those objectives were not attainable or because the teachers or schools were not enabled to provide the most effective interventions, then that would just add injustice to injustice.

5.4. The Limitations of this Study.

In the following section I will attempt to identify some of the limitations in this study. I will discuss limitations due to the type of study, problems with data sources, and problems with the variables.

5.4.1. Type of Study.

One major limitation of this study is that it was not an experimental study, so it was very limited in its ability to identify causes or effects. In other words, this was not a study that took place in the controlled environment of a laboratory with randomly selected control and experimental groups. For ethical and practical reasons, I could not randomly select some students to receive less school support than others (Charles & Mertler, 2002). A quasi-experimental study, such as mine, cannot identify the causes of problems or accurately measure the effects of interventions (Singleton & Straits, 2005). It can only estimate statistical relationships and attempt to control for spurious ones.

Another major limitation of this study was that it did not follow a cohort over a period of time, and therefore, may have inadvertently excluded some faster learning students who had already met state English proficiency standards and were no longer classified as ELs. In other words, my sample may have excluded some of the most resilient students, the very students I was interested in understanding. If I had started

with a sample comprised of a cohort of all entering in the same school year and then followed that cohort over time, not excluding any members who had left the EL subgroup, then I probably would have had a larger portion of resilient students included in my sample.

Because it was not a true longitudinal study collecting data at several points in time, it was even harder to show causal relationships between independent variables and the educational outcomes. Given that students completed the surveys at the same they took the tests, I could not say that the protective or risk factors chronologically preceded the educational outcomes, so I could not ascertain the direction of the relationships between variables. For example, if a student reported lower perceived pedagogical caring, I could not disentangle whether that perception had resulted from the poor educational outcomes or whether it had led to those outcomes. Likewise, I could not know whether protective factors such as ESOL services had a delayed effect many years later. Interventions, like the ESOL services that were assigned to students based on their limited English proficiency, were inevitably associated with that risk factor. Without a longitudinal cohort study, we cannot accurately estimate the effect of those interventions.

5.4.2. Sample.

The sample in this study has limitations because it was an intentional sample, one drawn out of convenience, and not a random sample. I can make no claims that the students in this study are representative of high school ELs nationwide and that my findings are generalizable (O'Leary, 2007). ELs in other parts of the country may be very different demographically and may not be as well supported. Research on ELs in the U.S. show they are often placed in failing schools and often do not receive

the academic support they need (Gandara, Rumberger, Maxwell-Jolly, & Callahan, 2003; de Cohen & Clewell, 2007). This study attempted to cope with its limitations through multiple regression analyses that accounted for differences between students and controlled for the school-based protective factors.

Unfortunately, when conducting multiple regression analyses, the sample also had limitations because its small size limited the number of variables I could control for in each analysis and made it harder to get accurate estimates. I had only 165 ELs from which I was able to collect sufficiently complete data, only 44 of whom were SLIFE, so the SLIFE subpopulation examined in this study was quite small. The accuracy of multiple regression estimates and the number of variables that can be included in each estimate depend on the sample size (Green, 1991; Tabachnick & Fidell, 1996; Allison, 1999) so I was limited to bivariate analyses for my SLIFE subpopulation. As the reliability of p values is also sensitive to size (Allison, 1999), the smaller sample meant findings that would have been statistically significant with a larger population did not show statistical significance, and some findings that would not have shown statistical significance did. Therefore, both type 1 and type 2 errors were more likely in my study. In a type 1 error, the null hypothesis is true but has been rejected, as in when an association is found to be statistically significant when no such association exists (Agresti & Finlay, 2009). In a type 2 error, the null hypothesis is false, but has not been rejected, as in when an association is not found to be statistically significant but a significant association actually exists.

5.4.3. Data Collection Methods and Instruments.

The data in this study may also be less accurate than optimal due to the manner in which they were collected.

For example, the survey instrument and its scales were being used on ELs for the first time. It is difficult to design survey instruments that are reliable across cultures, languages, and contexts especially when literacy and schooling issues are also involved. The survey instrument was translated into the students' first languages, and when necessary, read to them, but statements may have different implications depending on the student, even when translated well. For example, the survey instrument asked students to report whether they had ever been separated from their parents for a period of six months or more. Some students who reported such separations may have been separated from parents when their parents had come to the U.S. to work and left them behind. Others may have been separated from parents because those parents had sent them to the U.S. to study, while the parents remained in the homeland working and sending money. These two situations might affect students very differently and are tangled up with issues such as immigration status.

It is also a limitation that I was not allowed to include survey items that directly collected data on students' immigration or socio-economic status. As per the agreement with the school system, and for legal reasons, I was not allowed to ask whether students were undocumented. For immigrant students, immigration status may be one of the most important variables of all since it limits their opportunities in life. I suspect, however, that the social distance scale indirectly measured the effects of undocumented immigration status on students. Similarly, I was not told which students were from low-income families, and I was not allowed to ask, but data on parental education may have been just as useful.

It is also a limitation that this study often had to rely on self-reported data. Participants may tell researchers what they want the public to believe about them instead of what is "true" (Ainsworth-Darnell & Downey, 1998). This may explain why students' academic self-concept bore little relationship to their actual academic performance. It may also be that students' estimates of their own abilities may be inaccurate as could have happened when students reported their L1 literacy on arrival. Data on schooling gaps might have also been unreliable if students and families were afraid to disclose problems with their previous schooling to administrators when they first enrolled in their schools (Advocates for Children of New York, 2010).

5.4.4. Variables.

It is also a limitation the way that HSA scores had to be used in this study. The students in this study were actually taking three very different HSAs: Algebra, Biology, and 10th grade English, so the number of students taking each test was too small for robust regression analyses. For that reason, I converted each test score into a z-score and created a compound HSA score combining the data for all three tests (see the methods section page 102). Theoretically, this should not be a problem since the scores were converted to z-scores before they were merged, but I was combining tests that were measuring different skill areas. It is also important to mention that research shows that performance on such tests largely depends on English proficiency, even for math tests (Sierci, 2005; Duran, 2008; Martiniello, 2008), and the three different tests in this study were, in fact, significantly correlated with English proficiency.

5.4.5. Conclusion.

In conclusion, there were problems with the following: the ex-post facto nature of the study as it was neither an experimental or longitudinal design, the sampling methods and the small sample size, and real-world complications with the population of study. I hope that skillful use of multiple regression overcame some of these weaknesses.

In spite of these limitations, this study has value because it is the first quantitative study to combine school system data with student survey data to try to examine the resiliency process for SLIFE. Studies on SLIFE are very rare (DeCapua, Smathers, & Tang, 2010; Tarone, Bigelow, & Hansen, 2009; Tarone, 2010; Zehr, 2009). Furthermore, the literature review for this study showed that other studies on SLIFE are generally case studies with small numbers of cases and rely on qualitative data taken from interviews. Other studies exist that include SLIFE in the sample, but those studies were not designed to collect data on SLIFE and were therefore limited in doing so.

5.5. Future Research.

SLIFE are an under-researched group with much more research like this study needed (DeCapua, Smathers, & Tang, 2010; Tarone, Bigelow, & Hansen, 2009; Tarone, 2010; Zehr, 2009). However, to improve on this research, future studies must address the limitations of this study.

As one of the major limitations of this study was its small sample size, researchers may want to conduct a similar study in the future but with larger samples, so more accurate estimates can be made for the SLIFE subgroup.

This study could also be replicated with a true longitudinal design that follows a cohort of ELs over time and does not exclude those who have reached English proficiency. In this manner, we would not be excluding some of the most successful students who met state proficiency standards and are no longer classified as EL. We could also counter the accumulation effect (see methods page 121) in the sample and thereby more accurately estimate the effects of LFS and the protective and risk factors, especially interventions such as ESOL classes. This would help us better understand the factors in the resilience process as chronological differences could help us distinguish causes from effects and better estimate the effect of interventions. Besides reproducing this study, researchers should conduct other studies that focus more exclusively on the effect L1 literacy has on English learning. These studies should consider using more objective measures of L1 literacy, such as standardized tests instead of self-report data, but L1 literacy tests would need to be developed in the students' diverse languages.

Researchers may also want to study how ESOL services can be adapted to be more effective for SLIFE. Researchers have proposed special approaches to instruction for SLIFE (DeCapua & Marshall, 2010), and these approaches should be evaluated empirically. More research also needs to be conducted on the use of bilingual instruction to remediate L1 literacy issues and facilitate English learning. If the most significant issue is L1 literacy, then we must focus more on that.

5.6. Conclusion.

This dissertation reported on a quantitative study with 165 high school students classified as English learners (ELs), 44 of which might be considered to be

students with limited or interrupted formal schooling (SLIFE) based on their arriving with schooling gaps, low first language literacy, and beginner level English. This study combined school system data with data from student surveys in an effort to understand educational resilience among SLIFE. The theoretical framework used to examine educational resilience was Motivational Systems Theory, which proposes that educational resilience in educationally at-risk students is a process in which the students' school environment interacts with the students' academic self-concepts to facilitate better outcomes and enhanced academic self-concepts for future educational resiliency (Ford, 1992; Gordon Rouse, 2001).

This study found that SLIFE were more at-risk for lower academic outcomes than other ELs, but some were educationally resilient in that they eventually earned scores on standardized tests showing that they had met state standards for English proficiency and academic content mastery. However, SLIFE typically took longer to become proficient in English because they learned English more slowly and started at a lower level of proficiency. Because they were taking longer, they stayed classified as EL longer and accumulated in the EL population as long-term English learners.

This study found that SLIFE resilience largely depended on the individual indicators of LFS: schooling gaps, low L1 literacy, and beginner-level English. Students who reported having arrived with low L1 literacy tended to learn English more slowly. In fact, low L1 literacy might have been the main reason why SLIFE learned English more slowly than non-SLIFE. Lower English proficiency seemed to cause SLIFE to have lower scores on standardized tests of academic content, but schooling gaps also seemed to play a role.

This study found that students' school supports, beliefs, and social environment appeared to play a role in their educational outcomes but in ways that were different from what was reported in studies of academic resilience in non-ELs (Gordon Rouse, 2001). ESOL classes appeared to increase the rate of English learning, which was vital to academic achievement. Academic self-concept did not show any significant associations with educational outcomes; nor did it appear to significantly mediate or moderate associations with school-based protective factors and personal risk factors. Instead, achievement on standardized tests of academic content seemed to be influenced by other factors more specific to the immigrant context, namely their perception of the social distance between immigrants and mainstream "Americans" and social integration with "American" peers. Higher social distance predicted lower test scores, but strangely so did higher social integration. Social integration and social distance showed no significant association with the rate of English learning as measured by the WIDA ACCESS test, a test of academic English. I suggested that findings may be explained through Segmented Assimilation Theory (Portes & Zhou, 1993).

This study also found that the three indicators of limited formal schooling (LFS) used to identify SLIFE were not well correlated. In particular, schooling gaps had no significant correlation with low L1 literacy. This raises questions about constructs of LFS that confound schooling (time spent in school) with education (the learning that is attributed to schooling but may take place outside of school). It also raises questions about how SLIFE are identified and qualify for special interventions such as newcomer programs. I suggested that school systems focus more on the

students' education on arrival as measured by tests of L1 literacy and math and science knowledge instead of focusing exclusively on the amount of time they spent in and out of school before coming to the U.S.

Finally, I argued that support was absolutely essential to SLIFE educational resilience. I stated that ESOL courses seem to be effective for helping SLIFE gain the English proficiency they need, but that special programs might need to be in place for students who lack L1 literacy, math and science knowledge, and experience with the cognitive tasks required for formal schooling.

Appendix A: School System Permission

Name of the participating school system kept confidential.

January 25, 2011

Dear Mr. Browder:

I have reviewed your request to conduct research as part the requirements for the degree of Doctor of Philosophy at University of Maryland Baltimore County. The research study titled "Examining resilience in the educational outcomes of English language learners with limited formal schooling" has been approved. Based on the application you will be working under the guidance of [redacted]. In your application you will be asking 30 ESOL teachers to administer a short survey to students identified by you. It is understood that participation by these teachers is completely voluntary. It is further understood that you will notify the students' parents about your program and receive written consent that they are granting you permission regarding their child's participation. The consent form will also explain to them the other data you are requesting from the Office of Research and Program Evaluation staff. All data will be presented in summary form and all student information will be kept in confidence. No student, teacher or school will be named in your dissertation.

You are also expected to present all parent consent forms to my office before the study may begin. It is also expected that you will notify the principals of each high school that you are conducting this approved study.

My staff will assist you in pulling the remaining data (demographic and test records). Please remember that we do not report groups with 9 or fewer members and you will not have access to Free or Reduced Meals information.

You have one year from the date of this letter to complete your research. I wish you the best and feel free to contact me should you have additional questions.
Sincerely,

[redacted]
Coordinator of Research & Program Evaluation

cc: [redacted]

Appendix B: Institutional Review Board Approval

UMBC

AN HONORS UNIVERSITY IN MARYLAND

Date: January 3, 2011

To: Christopher T. Browder
Dr. Claudia Galindo

From: The Human and Animal Research Protections Office (HARPO)

Re: Notice of Action
Protocol # : **Y11CB14086**

Human and Animal Research
Protections Office
University of Maryland, Baltimore County
1000 Hilltop Circle
Baltimore, MD 21250

PHONE: 410-455-2737
FAX: 410-455-3868
EMAIL: HARPO@umbc.edu

Your protocol entitled **The educational Outcomes of English Language Learners with Limited Formal Schooling** has been **approved by expedited review** by the Institutional Review Board. This study fulfills the criteria for expedited review under 45 CFR 46.110, category # **5&7**.

Approval of this protocol will terminate on the below end date unless an Annual Continuation Report is submitted, in writing, to the IRB. The Human and Animal Research Protections Office will send you an email reminder prior to the end of the protocol; it is your responsibility, however, to assure that project activities are not conducted past the expiration date.

Reporting Calendar

Original approval date	Current end date	The next Annual Continuation Report is due by	Expect a reminder to renew by
12/21/2010	***12/20/2011***	**11/22/2011**	**11/08/2011**

Investigators are responsible for reporting ***in writing*** to the IRB any changes to the human subject research protocol, measures or in the informed consent documents. This includes changes to the research design or procedures that could introduce new or increased risks to human subjects and thereby change the nature of the research. In addition, you must report any adverse events or unanticipated problems to the IRB for review and approval. All correspondence and materials used in this protocol must reference the above IRB number.

Investigators are also reminded that all UMBC IRB approved consent forms will display an expiration date at the bottom of each page. Please check this date carefully each time an approved consent form is used, as using an expired form to consent participants is considered a substantial deviation from the Federal regulations governing research involving human subjects.

The investigator(s) identified above are required to retain an IRB protocol file, including a record of IRB-related activity, data summaries and consent forms. This file is to be made available for review for internal procedural (audit) monitoring. Please refer to the IRB *Researcher's Guide*, found via the Human and Animal Research Protections Office web site (http://www.umbc.edu/research/HARPO/), for additional information about the administration of your protocol.

If you have any questions, please contact HARPO via the above phone number or e-mail.

Cc: Timothy Sparklin

Expedited review approved by:

Susan Sonnenschein, Ph.D.
IRB Chair

Appendix C: Assent and Consent Forms

C.1. English Parental Consent Form.

English Language Learners' Educational Outcomes

Dear Parent or Legal Guardian,

I am inviting your child to participate in a study. The purpose of this study is to learn more about students who are learning English. I chose your child because he/she is learning English.

What are your rights? You have the right to carefully read this paper and ask the researcher questions before deciding whether your child will participate. You also have the right to not have your child participate and no one will be angry with you or your child. If you choose to have your child participate, you may still choose to end your child's participation anytime you want.

What will your child be asked to do? If you agree, your child will be asked to complete one survey. It will take about 30 minutes to complete. This survey will not disrupt your child's school schedule or learning. It will be done in school during the regular school day.

Is there any risk? The survey will not ask your child to answer any questions that could cause your family any harm or legal trouble. Your child's answers on the survey will be kept confidential. They will not be shown to teachers or school administrators. Your child's name will never be used when we share the findings of the study with others.

What do I need to do? Please, use the form on the bottom of the page to show us whether or not you wish your child to participate, and return it to the school. If you have any questions about this study, please call Chris Browder at 410-206-8983.

This study has been approved by the Institutional Review Board (IRB) of the University of Maryland, Baltimore County. You may contact them at 410-455-2737 if you need to.

Sincerely Yours,

Christopher T. Browder

_____ **Yes**, I give permission for my child to participate in the study.

_____ **No**, I do not wish to have my child participate in this study.

_____ I would like more information before deciding whether my child will participate. Please, contact me at (phone number) _____. The best time to call me is (time) _____. I prefer to speak in (language) _____.

Parent's signature: _____

Parent's name (print): _____

Child's name: _____

C.2. English Student Assent Form.

Whom to Contact about this study:
Principal Investigator: Chris Browder
Telephone number: 410-206-8983

Title of Project: ***English Language Learners' Educational Outcomes***

Participant's name: _____

ASSENT FORM FOR PARTICIPATION IN RESEARCH ACTIVITIES
We are asking you to be in a research study. This form will tell you all about the study and help you decide to be or not be in the study. Read this paper carefully and ask any questions you have. You might have questions about what you will do, how long it will take, or if anyone will find out how you did. When we have answered all of your questions, you can decide to be or not to be in the study. This is called "informed consent."

What the study is about:
The purpose of this study is to learn more about high school students who are learning English. We want to understand what makes some students try harder than others. We chose you because you are learning English.

What I'm being asked to do:
You will start participating in this study after you have signed this assent form. You will complete one survey. It will take about 30 minutes to complete. This survey will not disrupt your schedule or learning. It will be done in school during the regular school day.

Risks and Benefits:
Taking these surveys does not involve any significant risks to you. The surveys will not ask you any questions that could cause you or your family any harm or legal trouble. Your participation in this research will not benefit you personally, but information from this study will be used to help other students like you be more successful in school.

Privacy:
If you participate in this study, we will not tell anyone else how you did. We will not show your answers to your teachers or school administrators. The information on you will be stored in a locked file cabinet in a locked room. We will use this information to write a big paper on the educational outcomes of English language learners. Your name will not be used in that paper. After we write the paper we will throw away all of this information.

Appendix D: Translated Assent and Consent Forms

D.1. Chinese Parental Consent Form

2011年8月23日
英语学习生的教育成果 (English Language Learners' Educational Outcomes)

亲爱的家长或法定监护人，

我要邀请您的孩子参加一项研究。这项研究的目的是要更了解正在学习英语的学生。我选择了您的孩子参加是因为他/她正在学英语。

您有什么权利？您有权利仔细阅读这份文件，并且在决定孩子是否参加之前，向研究员提出问题。您也有权利不让孩子参加，没有人会生您的气或对您的孩子生气。如果您选择让孩子参加研究，您也仍然可以随时选择中止孩子的参与。

您的孩子将被要求做什么？如果您同意，您的孩子将被要求填写一份问卷。问卷需要大约30分钟完成。问卷将不会干扰孩子的学校课表或学习。问卷将在学校里在一般上课日中填写完毕。

研究有任何风险吗？这份问卷将不会问你的孩子任何可能对您家庭造成危害或法律麻烦的问题。您孩子在问卷上填写的回答将获得保密。您孩子的回答不会拿给老师或学校行政人员看。当我们与他人分享研究发现结果时，绝不会使用您孩子的姓名。

我需要做什么？请利用本页底部的表格，告诉我们您是否愿意让孩子参加研究，并将表格交回学校。如果您对本研究有任何疑问，请打 410-206-8983 与 Christopher Browder 联络。

本研究已经获得马里兰州立大学巴尔地摩郡分校 (University of Maryland, Baltimore County) 之机构审核委员会 (Institutional Review Board，简称IRB) 核准。如果有需要，您可以打 410-455-2737 与他们联络。

诚致敬意，

Christopher T. Browder

_____ **是，**我准许我的孩子参加这项研究。

_____ **否，**我不希望我的孩子参加这项研究。

_____ 在我决定是否让我的孩子参加研究前，我想获得更多信息。请拨 (电话号码) _____与我联系。最适合打电话给我的时间是 (时间) _____。我比较习惯说 (语言) _____。

家长签名： _____

家长姓名（正体字） _____

子女姓名： _____

D.2. Korean Parental Consent Form

2011년 8월 23일

영어학습자의교육적결과

학부모님또는가디언님께,

저는 당신의 자녀를 제가 주도하는 연구조사에 참여하도록 초대합니다. 이 연구의 목적은 영어를 배우는 학생들에 대해서 좀 더 잘 알고 그 학생들을 잘 지도하고자 하는 것입니다. 제가 당신의 자녀를 선택한 이유는 당신의 자녀가 영어를 배우고 있기 때문입니다.

당신의 권리는 무엇입니까? 당신은 이 문서를 조심스럽게 읽고 연구 조사자 에게 질문한 후, 당신의 자녀가 이 연구에 참여할지 여부를 결정할 권리가 있습니다.
당신의 자녀가 이 연구조사에 참여하지 않을지라도 아무도 당신이나 당신의 자녀에게 화를 내지 않을 것입니다. 만약 당신의 자녀가 참여하도록 당신이 결정한다 할지라도 당신이 원하면 아무 때나 학생의 참여를 중지하도록 선택하실 수 있습니다.

당신의 자녀는 무엇을 하도록 하게 될 것인가?만약 당신이 동의 한다면 당신의 자녀는 설문조사지 하나를 완성하라고 하는 요구를 받을 것입니다. 설문조사지 완성 시간은 약 30분 가량이 될 것입니다. 이 설문조사는 당신의 자녀의 학업이나 또는 학교 스케줄에 방해가 되지 않을 것입니다. 설문조사지는 학교 수업 일수 중에 배포될 것입니다.

어떤 위험이 있는가? 설문조사는 당신의 자녀나 가정에 해를 끼치거나 또는 법적인 문제를 일으킬 어떤 것도 묻지 않을 것입니다. 당신의 자녀의 설문지 대답은 공개되지 않을 것입니다. 학교 선생들이나 또는 학교 행정관들에게도 공개되지 않을 것입니다. 당신의 자녀의 이름도 연구조사의 결과를 논의할 때 다른 사람들에게 결코 공개되지 않을 것입니다.

내가 무엇을 하는 것이 필요한가? 문서의 하단에 당신의 자녀의 연구조사 참여 여부를 표기해 주시고 그것을 다시 학교로 돌려 보내 주시기 바랍니다. 만약 연구 조사에 대한 질문이 있으시면 크리스 부라우더에게 410-206-8983으로 연락해 주시기 바랍니다.

이연구조사는볼티모어카운티메릴랜드대학의학회재검토위원회에인가를받았습니다. 410-455-2737

Christopher T. Browder크리스토퍼부라우더올림

_____ **네**, 저는제자녀가이연구조사에참가하는것을승낙합니다.

_____ **아니오**, 저는제자녀가이연구조사에참가하는것을승낙하지않습니다.

저는 제가 제 자녀의 참가를 결정하기 전에 좀 더 많은 정보를 알고 싶습니다.
_____(전화번호)로 제게 연락 주시기 바랍니다. 가장 통화하기에 좋은 시간은 _____(시간) 입니다. 저는 _____(언어: 한국어 또는 영어)로 대화하기를 원합니다.

학부모님사인:_____

학부모님존함:_____

자녀이름: _____

D.3. Spanish Parental Consent Form

23 de agosto del 2011
Resultados Educativos de Aprendices del Idioma Inglés

Estimado Padre o Tutor Legal:

Estoy invitando a su niño/a a participar en un estudio. El objeto de este estudio es aprender más sobre los estudiantes que están aprendiendo inglés. Escogí a su niño/a porque él/ella está aprendiendo inglés.

¿Cuáles son sus derechos? Usted tiene el derecho de leer cuidadosamente este papel y formular preguntas al investigador antes de decidir si su niño/a participará. Usted también tiene el derecho de no hacer participar a su niño/a y nadie estará enojado ni con usted ni con su niño/a. Si usted escoge hacer que su niño/a participe, aún así usted puede cancelar la participación de su niño/a en cualquier momento.

¿Qué se le pedirá que haga su niño/a? Si usted está de acuerdo, a su niño/a se le pedirá que complete una encuesta. Llevará aproximadamente 30 minutos completarla. Esta encuesta no interrumpirá el horario ni aprendizaje escolar de su niño/a. Será efectuado en la escuela durante el día escolar habitual.

¿Existe algún riesgo? La encuesta no solicitará que su niño/a responda a ninguna pregunta que pudiera causarle a su familia algún daño o problema legal. Las respuestas de su niño/a en la encuesta se mantendrán de manera confidencial. No se les mostrarán a maestros o directores escolares. El nombre de su niño/a jamás será usado cuando compartamos los resultados del estudio con otras personas.

¿Qué necesito hacer? Por favor, utilice el formulario en la parte inferior de esta página para indicarnos si desea o no que su niño/a participe y devuélvalo a la escuela. Si tiene alguna pregunta sobre este estudio, por favor, llame a Chris Browder al 410-206-8983.

Este estudio ha sido aprobado por la Junta de Estudios Institucionales (IRB) de la Universidad de Maryland, en el Condado de Baltimore. Puede comunicarse con ellos al 410-455-2737 en caso de necesitarlo.

Atentamente,

Christopher T. Browder

_____ **Sí**, doy mi permiso para que mi niño/a participe en el estudio.

_____ **No**, no deseo que mi niño/a participe en este estudio.

_____ Desearía más información antes de decidir si mi niño/a participará. Por favor, comuníquense conmigo al (número de teléfono) _____. La mejor hora para llamarme es (hora) _____. Prefiero hablar en (idioma) _____.

Firma del Padre: _____

Nombre del Padre (en imprenta): _____

Nombre del Niño/a: _____

D.4. Urdu Parental Consent Form

Urdu

اگست 23 ، 2011
انگریزی زبان سیکھنے والوں کے تعلیمی نتائج

محترم والدین یا قانونی سرپرست،

میں آپ کے بچے کو ایک سٹڈی میں شرکت کی دعوت دے رہا ہوں۔اس سٹڈی کا مقصد ہے کہ جو طالب علم انگریزی سیکھ رہے ہیں ان کے بارے میں مزید معلومات حاصل کی جاسکیں۔ میں نے آپ کے بچے کا انتخاب اس لئے کیا ہے کہ وہ انگریزی سیکھ رہا/رہی ہے۔

آپ کے کیا حقوق ہیں؟ آپ کو حق حاصل ہے کہ اس کاغذ کا بغور مطالعہ کریں اور یہ فیصلہ کرنے سے پہلے کہ آیا آپ کا بچہ اس میں حصہ لے تحقیقی سوالات پوچھیں۔ آپ کو یہ حق بھی حاصل ہے کہ اپنے بچے کو شرکت سے روک دیں اور ایسا کرنے پر کوئی بھی آپ سے یا آپ کے بچے سے ناراض نہیں ہوگا۔ اگرچہ آپ یہ فیصلہ کریں کہ آپ کا بچہ اس میں شرکت کرے، اس کے باوجود آپ جب چاہیں اپنے بچے کی اس میں شرکت ختم کر سکتے ہیں۔

آپ کے بچے سے کیا کرنے کو کہا جائے گا؟ اگر آپ رضامند ہوں، تو آپ کے بچے سے ایک سروے مکمل کرنے کے لئے کہا جائے گا۔ اسے مکمل کرنے میں 30 منٹ لگیں گے۔ یہ سروے آپ کے بچے کے سکول کے اوقات کار یا تعلیم میں مخل نہیں ہوگا۔ یہ سکول کے عام دن میں دورانِ سکول مکمل کیا جائے گا۔

کیا اس میں کوئی خطرہ ہے؟ اس سروے میں آپ کے بچے سے کسی سوالات کا جواب دینے کو نہیں کہا جائے گا جس سے آپ کے خاندان کو کوئی خاندان یا قانونی مشکل درپیش آئے۔ آپ کے بچے کا سروے پر جواب راز میں رکھا جائے گا۔ یہ اساتذہ کو یا سکول کے ایڈمنسٹریٹرز کو نہیں دکھایا جائے گا۔ جب سٹڈی کے نتائج دوسروں کو بتائے جائیں گے تو آپ کے بچے کا نام ہرگز ظاہر نہیں کیا جائے گا۔

مجھے کیا کرنا ہو گا؟ براہ مہربانی، نیچے صفحہ کے نیچے دیے گئے فارم کو استعمال کریں تا کہ ہمیں پتہ چلے کہ آپ اپنے بچے کو شرکت کرنے کی اجازت دیتے ہیں یا نہیں، اور پھر اسے بھر کر سکول میں واپس بھیج دیں۔ اگر آپ کو اس سٹڈی کے متعلق کوئی سوالات پوچھنے ہوں تو کرس بروڈر (Chris Browder) کو اس نمبر پر فون کریں 410-206-8983۔

یہ سٹڈی یونیورسٹی آف میری لینڈ بالٹی مور کاؤنٹی کے انسٹی ٹیوشنل ریویو بورڈ (IRB) سے منظور شدہ ہے۔ اگر آپ ضرورت محسوس کریں تو ان سے 410-455-2737 پر رابطہ کر سکتے ہیں۔

آپ کا مخلص،

کرسٹوفر ٹی۔ بروڈر

ہاں، میرے بچے کو سٹڈی میں شرکت کی اجازت دی جاتی ہے۔ _____

نہیں، میری خواہش ہے کہ میرا بچہ سٹڈی میں شریک نہ ہو۔ _____

بچے کو شرکت کرنے کی اجازت دینے کا فیصلہ کرنے سے قبل مجھے مزید معلومات درکار ہیں۔ براہ کرم، مجھ سے اس نمبر پر رابطہ کریں (فون نمبر phone number) _____ ۔ مجھے فون کرنے کا بہترین وقت ہے (time) _____ ۔ میں اس زبان میں گفتگو کرنا پسند کروں گا/گی (language) _____ ۔

والدین کے دستخط Parent's Signature: _____
والدین کا نام (پرنٹ) Parent's name: _____
بچے کا نام Child's name: _____

Appendix E: Annotated Survey Instrument

student ID # _____

Thank you for agreeing to participate in this short survey. Please, answer every question as well as you can. Your answers will be kept confidential.

Part One:
Instructions: Circle the number to show your opinion about each statement.

Practice items:

	Strongly disagree	Disagree	Agree	Strongly agree
I like chocolate.	1	2	3	4
The walls of this room are white.	1	2	3	4
Flowers are ugly.	1	2	3	4

These items train students who are unfamiliar with surveys to answer this type of question.

Survey items:

Key variables are placed in the front of the survey.

How well could you read and write in Chinese **when you came to America**?

first language literacy

	Strongly disagree	Disagree	Agree	Strongly agree
1. I could read as well in Chinese as most American kids my age could read in English.	1	2	3	4
2. I could write as well in Chinese as most American kids my age could write in English.	1	2	3	4

Items are customized so underlined language is first language of respondent.

What do you think about school?

academic self-concept

	Strongly disagree	Disagree	Agree	Strongly agree
3. My grades are very important to me.	1	2	3	4
4. Learning English is very important to me.	1	2	3	4
5. Learning math and science is very important to me.	1	2	3	4
6. I can get high grades in most classes if I try.	1	2	3	4
7. Learning English is easy for me.	1	2	3	4
8. I am good at learning math and science.	1	2	3	4
9. Most people can get good grades in school if they try hard enough.	1	2	3	4
10. Some people are naturally good at learning languages.	1	2	3	4
11. Grades on tests usually show how much a person has studied.	1	2	3	4
12. If I get good grades, I can have a better future.	1	2	3	4

3-5 having academic goals

6-8 academic self-efficacy

9-11 academic locus of control

13. I can have a better life if I improve my English.	1	2	3	4
14. Math and science are important for my future career.	1			

12-14 belief that academic goals are personally worthwhile

What are your experiences with your teachers here in the U.S.A.?

	Strongly disagree	Disagree	Agree	Strongly
15. My teachers really care about me.	1	2	3	4
16. My teachers try hard to make my classes interesting.	1	2	3	4
17. My teachers treat some kids better than they treat me.	1	2	3	4
18. I can talk to my teachers about problems in my life.	1	2	3	4
19. My teachers try to help me understand their lessons.	1	2	3	4
20. My teachers think I am a good student.	1	2	3	4
21. My teachers think I am smart.	1	2	3	4
22. My teachers give me extra help when I need it.	1	2	3	4

pedagogical caring

What do you think about the U.S.A.?

social distance

	Strongly disagree	Disagree	Agree	Strongly agree
23. I will probably stay in the U.S.A. for a short time.	1	2	3	4
24. Americans think they are better than immigrants.	1	2	3	4
25. The way of life in my country is better than the American way of life.	1	2	3	4

What are your experiences with American students in your school?

social integration at school

	Strong disagree			ngly agree
26. American students in my school are interested in learning about me.	1	2	3	4
27. American students in my school want to talk to me.	1	2	3	4
28. American students in my school sometimes make fun of me.	1	2	3	4
29. American students in my school sometimes bully me.	1	2	3	4
30. I have many American friends in my school.	1	2	3	4

Tell me about the adults in your home. authoritative adult supervision

	Strongly disagree	Disagree	Agree	Strongly agree
31. When I come home from school, there is an adult at home.	1	2	3	4
32. When I go to sleep at night, there is an adult at home.	1	2	3	4
33. I live with an adult who asks me about my opinions.	1	2	3	4
34. I can talk to an adult at home about my problems.	1	2	3	4
35. I live with an adult who cares about my education.	1	2	3	4
36. I live with an adult who makes rules that help me be successful in school.	1	2	3	4
37. I live with an adult who rewards me when I get good grades.	1	2	3	4
38. I live with an adult who helps me be a good student.	1	2	3	4
39. I live with an adult who knows my grades in school.	1	2	3	4

31-32 adult supervision

33-39 authoritative parenting

35-39 authoritative parenting that supports education

What are some of the bad experiences in your life?

	Strongly disagree	Disagree	Agree	Strongly agree
40. I have seen people seriously hurt or killed in a war, accident, natural disaster, or crime.	1	2	3	4
41. I have been very afraid in a war, accident, natural disaster, or crime.	1	2	3	4
42. I have been attacked or hurt in a war, accident, natural disaster, or crime.	1	2	3	4
43. I was separated from one or more parents for over six months.	1	2	3	4
44. When I moved to this area, I left behind people who took care of me.	1	2	3	4

40-42 traumatic experiences

43-44 separations from caretakers

How do your friends feel about school?

educational orientation of peers

	Strongly disagree	Disagree	Agree	Strongly agree
45. My friends come late to school.	1	2	3	4
46. My friends skip school or cut classes.	1	2	3	4
47. My friends are planning to go to college.	1	2	3	4
48. Some of my friends have dropped out of school.	1	2	3	4
49. My friends believe that education is important.	1	2	3	4
50. My friends like school.	1	2	3	4
51. My friends study and do homework.	1	2	3	4
52. My friends want me to be a good student.	1	2	3	4

Does anyone from your family or community help you with your schoolwork?

	Strongly disagree	Disagree	Agree	Strongly agree
53. Someone from my family, community, or church helps me learn English or study.	1	2	3	4

Part Two:

Instructions: Fill in the blank below with the number that best answers the question.

54. How many hours do you usually spend each day studying or doing homework after school?

    I usually spend ____ hours each day studying or doing homework after school.

    studying

55. How many hours do you usually spend each week working at a part-time job?

    work

    I usually work ____ hours each week at a part time job.

56. What is the highest level of education yo

no education	= 0
elementary school	= 5
middle school	= 8
high school	= 12
college	= 14-16

    I think my father has around _____ ye

    I think my mother has around _____ years of education.

57. How many school clubs are you currently a member of?

    I am a member of _____ clubs.

    participation in extra-curricular activities

58. How many school teams have you been in this year?

    I am a member of _____ teams.

59. How many school dances have you attended this year?

    I have attended _____ school dances.

60. How many school games have you attended to this year? (Do not include games you attend as a member of a team that is playing.)

    I have attended _____ school games.

Thank you for your participation in this study!

Appendix F: Translated Survey Instruments

F.1. Survey in Chin.

Student ID_____

Hi tuaktanknak tawizohnak ah I telve ding in na lung a tling caah kannil awm. Zangfahnak in, biahalnak hna hi rak phi hna. Na phitmi, midang kan theihter hna lai lo.

Zohnakpakhatnak:

Hmuhsaknak: Hi chungah hin nangmah ruah nak/hmuhnak kha kulhpiak.

Zohchunnak:

	Ka lung atlinghrimlo	Ka lung a tling lo	Ka lung a tling	Ka lung a tlingtuk
Chocolate ka duh.	1	2	3	4
Hika khan I vampang cu a rang.	1	2	3	4
Pangparhna cu anmui a chia tuk.	1	2	3	4

Tuaktanknak:
America na rak phak ah hin zeitluk in dah Chin hi narelkhawh I natialkhawh?

	Ka lung a tlinghrim lo	Ka lung a tling lo	Ka lung a tling	Ka lung a tlingtuk
1. American hngakchia, keimah thirual hna nih mirangca an rel khawhtluk in Chin/Lai ca hi karel khawh ve.	1	2	3	4
2. American hngakchia, keimah thirual hnanih mirangca an tial khawh tluk in Chin/Lai ca hi katial khawh ve.	1	2	3	4

Sianginn hi zeitindahnaruah?

	Ka lung a tlinghrim lo	Ka lung a tling lo	Ka lung a tling	Ka lung a tlingtuk
3. Ka hmak hna hi kei kacaah an biapi tuk.	1	2	3	4
4. Mirang cacawn hi kei ka caah cun an biapi tuk.	1	2	3	4
5. Tin chia le Science cawn hi kei ka caah cun an biapi tuk.	1	2	3	4
6. Kaa zuam ahcun, ka class paoh ah hin hmat tha ka hmuh khawh ko lai.	1	2	3	4
7. Kei ka caah miring ca cawn cu a fawituk.	1	2	3	4
8. Tin chia le Science cu ka thiam ko.	1	2	3	4
9. Mi tampinih an sianginn ah fakpi in ca an i zuam ahcun hmattha an hmuh khawh ko lai.	1	2	3	4
10. Mi cheukhat cu an i chuahpi mi thluak thatnak holhthiam fawinak an ngei.	1	2	3	4
11. Tests tuahmi i hmuhmi hmat nih hin zeit huk in dah ca a zoh ti kha a langhter.	1	2	3	4
12. Hmattha ka hmuh ah cun, hmailei ka caah a tha lai.	1	2	3	4
13. Mirang holh ka thiam deuh ah cun, nuam deuh in ka nung kho lai.	1	2	3	4
14. Tinchia le Science hi hmailei ka ca cawnnak ah an bia pi ngai ngai.	1	2	3	4

U.S.A i nasayahna he zeitindahnatonning a si?

15. Ka saya te nih ka zawn an ka ruat ngai.	1	2	3	4
16. Ka saya te nih ka class chung ah lungtho khawhnak ding caah an i zuam ngai.	1	2	3	4
17. Ka saya te nih keimah nak in midang that deuh in an zoh khen hna.	1	2	3	4
18. Ka saya te sin ah ka buainak hna hi ka chim hna lai.	1	2	3	4
19. Cawnnak hi lung piang kho ding in ka saya te nih bawmh an ka timh.	1	2	3	4
20. Ka saya te nih siangngakchia tha na si tiah an ka ruah.	1	2	3	4
21. Ka saya te nih miza na si tiah an ka ruah.	1	2	3	4
22. Ka saya te nih bawmh ka herh caan ah a hlei in an ka bawmh.	1	2	3	4

U S A hi zeitindahnaruahning a si?

	Ka lung a tlinghrim lo	Ka lung a tling lo	Ka lung a tling	Ka lung a tlingtuk
23. U.S.A ah hin can tawite long ka um men lai.	1	2	3	4
24. American nihhin, mi pemnak in kan sang deuh tiah an iruah.	1	2	3	4
25. Kan ram i kan nunning kha America ram I nun ningnak in a tha deuh.	1	2	3	4

Na sianginnkainak ah American sianghngakchia hezeitindahnatonning a si?

	Kalung a tlinghrim lo	Ka lung a tling lo	Ka lung a tling	Ka lung a tlingtuk
26. Kan sianginn i American sianghngakchia pawl nih kei mah kong lam hi theih an ka duh ngai.	1	2	3	4
27. Kan sianginn i American sianghngkchia pawl nih chon biak an ka duh ngai.	1	2	3	4
28. Kan sianginn i American sianghngakchia pawl nih a can ah cun capo ah an ka saih taan.	1	2	3	4
29. Kansianginn I American sianghngakchia pawl nih a can ah cun an ka neh sawh.	1	2	3	4
30. Kan sianginn ah American sianghngakchia hawikom tam pi ka ngeih hna.	1	2	3	4

Nan inn ahnau/upa le an kongrakkachimtuah.

	Ka lung a tlinghrim lo	Ka lung a tling lo	Ka lung a tling	Ka lung a tlingtuk
31. Sianginn ka rak tin paoh ah, kan inn ah upate an um peng ko.	1	2	3	4
32. Ih nak ah ka kaltiang kan inn ah kau le an um peng ko.	1	2	3	4
33. Ka um ti mi u/upa nih cun karuahnak a ka hal tawn.	1	2	3	4
34. Ka um ti mi u/upa sin ah ka ton mi kan buai bai nak ka chimh tawn.	1	2	3	4
35. Ka um ti mi u/upa nih ka ca cawnnak kong hi a ka ruahpiak ngai.	1	2	3	4
36. Ka um ti mi u/upa nih zulh ding phunglam a ka tuahpiak mi nih sianginn ah a ka bomh ngai.	1	2	3	4
37. Ka um ti mi u/upa nih cun hmak tha ka hmuh can pa oh ah laksawng a ka pek tawn.	1	2	3	4
38. Ka um ti mi u/upa nih cun sianghngakchia tha si ding in a ka bomh.	1	2	3	4
39. Ka um ti mi upa nih cun sianginn ah hmah ka hmuhmi hna hi a theih ko hna.	1	2	3	4

Na nunnak ah a thalo mi natonmizeidah a si?

	Ka lung a tlinghrim lo	Kalunf a tling lo	Ka lung a tling	Ka lung a tlingtuk
40. Minung fah ngai in hma a hmumi/ral tuk nak ah a thi mi hna, esidenh a tong mi hna, li aa hninh i tilet a tho mi hna le mi tha lo/mi sual hna ka hmuh hna.	1	2	3	4
41. Raltuk mi, esident a tongmi, li aa hninh I tilet a thomi/mitha lo misual hna ka hmuh tik ah ka tih tuk hna.	1	2	3	4
42. Raltuk nak ah mi ai thatmi/hma a oumi, mifir/mithalo pawl ka hmuh bal hna.	1	2	3	4
43. Ka nu le ka pa te he thlaruknak in tamdeuh an sin ah um lo in kan i hlat/then bal.	1	2	3	4
44. Hi ka hmun ka rak phanh nu ah cun, a hlan i a rak ka zoh khen tu hna kha zei ah ka rel ti hna lo.	1	2	3	4

Na hawilenihsianginn hi zeitin an ruah/hngalhning a si.

	Ka lung a tlinghrim lo	Ka lung a tling lo	Ka lung a tling	Ka lung a tlingtuk
45. Ka hawi le cu sianginn kai an tlai peng.	1	2	3	4
46. Ka hawi le cu kan classes hi thitha/tlamtling in an kai lo.	1	2	3	4
47. Ka hawile cu college kai an i tim.	1	2	3	4
48. Cheu khat ka hawile cu sianginn in an chuak cang.	1	2	3	4
49. Ka hawile nih cawnthiam nak hi a bia pi tuk an ti.	1	2	3	4
50. Ka hawile nih sianginn kai an duh ngai.	1	2	3	4
51. Ka hawile ca an zoh I innca an tuah.	1	2	3	4
52. Kahawi le nih siang hngakchia tha si ding in an ka duh pi.	1	2	3	4

Nan chungkhat ah na u nau si hna seh, hmunkhat ah na um ti mi hna pakhat khat hna si hna seh, inn ah cazoh le catuah an in bawm bal maw?

	Ka lung a tlinghrim lo	Ka lung a tling lo	Ka lung a tling	Ka lung a tlingtuk
53. Kan chungkhat chung in siseh, kan um ti hawi hna si hna seh, kan krifa bu chung in si hna seh, miring ca le holh ka thiam khawhnak ding caah an kabomh tawn.	1	2	3	4

Zohnakpahnihnak:
Biahmaithi: A tang lei bia hal nak hna hi a tha bik na ti mi number in rak phi hna.

54. Sianginn na dih hnu in inn ah nikhat ah suimilam pa zeizat dah ca nazoh i/na tuah tawn?

    Caan hman tein nikhat ah suimilam _____ hi ca zohak le ca tuahnak ah can ka hmang.

55. Zarkhat ah suimilam pa zeizat dah rian tuannak (part-time job) ah can na hman?

    Caan hman tein zarkhat ah suimilam _____ hi rian tuan nak ah can kah mang.

56. Na nu/pa hi tang zeizat tiang dah an kai?

    Kapa hi tang _____ hrawng a kai theu lai ti ka ruah.

    Kanu hi tang _____ hrawng a kai theu lai ti ka ruah.

57. A tu hi sianginn clubs pa zeizat ah dah natel?

    Clubs pa _____ ah ka tel.

58. Tu kum chung ah sianginn team pa zeizat ah dah natel?

    Teams pa _____ ah ka tel.

59. Tu kum chung ah sianginn nih tuah mi lam nak puai ah voi zeizat dah na tel kho?

    Sianginnlamnakpuai ah voi _____ ka tel kho.

60. Tukum chung ah sianginn len tecelhnak ah voi zeizat dah na tel kho? (A dang nember team he nan ni celhmi teh na tel chih maw.)

    Sianginn len tecelh nak ah voi _____ ka tel kho.

Hi cawnnak ah na tel khawn caah kan ni lawm!

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