EXPLORING DEMOGRAPHIC CORRELATES OF LANGUAGE

PROFICIENCY AND ACADEMIC ACHIEVEMENT AMONG ENGLISH

LANGUAGE LEARNERS

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Laura A. Katz, M.Ed.

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Examining Committee Members:

Erin Rotheram-Fuller, Advisory Chair, School Psychology
Joseph DuCette, Educational Psychology
Frank Farley, School Psychology
Catherine Fiorello, School Psychology
Kenneth Thurman, Curriculum, Instruction and Technology in Education

ABSTRACT

Exploring Demographic Correlates of Language Proficiency and Academic Achievement Among English Language Learners

Candidate's Name: Laura A. Katz

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Major Advisor: Erin Rotheram-Fuller, Ph.D.

Contemporary research suggests that multiple criteria, including SES, ethnicity, first and second language proficiency levels, language dominance, immigrant and/or generational status, acculturation status, and educational placement history predict ELL student achievement levels (Abedi, 2008). However, the majority of states do not examine these factors and instead use a combination of the Home Language Survey (HLS) plus an English language proficiency test for screening and identification, though it is debated if these instruments adequately measure the type of language proficiency needed to be successful in mainstream classrooms (O'Malley & Pierce, 1994). Because of these findings, it seems that multiple criteria are important to examine when screening students for English Language Learner (ELL) placement. It is hypothesized that a more detailed classification system will better predict students' academic language abilities as part of a universal screening effort, and truly identify those at most need for specialized language support.

The present study uses a correlational design to examine the relationship between a parent interview form, the Bilingual Parent Interview (BPI) and students' language proficiency scores in both their native and second languages, as well as their academic

achievement. It was hypothesized that the multiple criteria assessed with the BPI would be more associated with language proficiency abilities and academic achievement than the HLS. English-Language Learners (ELLs; n= 42) in grades two through five were targeted for participation. Families were recruited from a public elementary school in a city in Southern California. Record reviews were conducted to collect parents' responses on the HLS and the BPI, as well as students' language proficiency scores on the California English Language Development Test (CELDT), the Language Assessment Scales Links Español, and the Preschool Language Assessment Scales 2000 Español 2000 (Pre-LAS 2000). In addition, students' academic achievement based upon the California STAR program was also collected.

It was anticipated that items on the BPI would better correlate students' language abilities and academic achievement than those from the HLS. However, it was determined that the HLS better correlated with measures of English Language Proficiency and Spanish Language Proficiency, therefore providing initial support for the validity of this measure. Examination of the socio-cultural factors related to the language abilities and academic outcomes of at-risk ELL students expands upon efforts to identify students in need of remedial support as part of an early prevention model. In addition, the assessment of language proficiency and achievement data in both English and Spanish extends the effort to discriminate between endogenous learning disabilities and language delays resulting from second language acquisition amongst ELL children who struggle academically.

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CHAPTER 1

INTRODUCTION

Research Problem

The number of individuals who speak a language other than English has more than doubled in the past two decades, far surpassing the increase in the total population of the United States (Ramirez, 2004). This trend has had a profound impact on our educational system, as there are 4,584,946 English Language Learners (ELLs) with limited English skills in our public schools. This means that almost ten percent of all school-aged students lack the English proficiency skills to succeed in mainstream classrooms. In California alone, there are over 1,511,646 ELLs with limited English proficiency, representing twenty-five percent of total student enrollment. Although there are more than 460 languages spoken by English-Language Learners (ELLs) in American public schools, approximately eighty percent of all ELL students are native Spanish-speakers. Cross-sectional research consistently shows that ELLs achieve far behind their monolingual peers (Keiffer, 2008). Given the large numbers of ELLs in public schools that are projected to increase exponentially, researchers and educators need a system to accurately identify students in need of English-as-a-Second-Language (ESL) support services in order to provide these students with the tools needed to succeed in school.

There are a wide range of criteria used by states and districts in qualifying who is eligible for ELL status (O'Malley & Pierce, 1994; Ragan & Lesaux, 2006). A major impetus for this confusion lies in the flexibility given to states by the federal government in determining

specific identification and classification procedures. In this way, all states are required to ensure the academic progress of ELL students, but the specific procedures are determined by state and district discretion. In general, states vary greatly in their policies and use an assortment of criteria, including parent information, teacher referrals, grades, language proficiency test scores and statewide achievement test scores (O'Malley & Pierce, 1994; Ragan & Lesaux, 2006). However, an underlying commonality is the use of the Home Language Survey (HLS) to pre-screen students for ELL evaluation (Del Vecchio & Guerrero, 1995). The HLS is given to parents of all incoming students in any given school and generally consists of two to four questions asked of parents regarding the students' language backgrounds. The procedure usually entails qualification of ELL status if parents indicate the use of Spanish on any of their responses, at which point students are then evaluated to determine their English language proficiency. Currently, there is no evidence that supports the reliability and validity of the HLS in accurately identifying ELL students in need of language support services.

Some have suggested that parents may incorrectly respond to questions on the HLS because of their own limited language skills, fears of retribution from immigration officials, belief in the inequity of bilingual education, and comprehension difficulties (Abedi, 2008; O'Malley & Pierce, 1994; Zuniga, 2004). Inaccurate responses may lead students to be excluded from ESL programs and subsequent instructional interventions, such as transitional academic supports, that are often needed to avoid academic failure for bilingual students (Suarez-Orozco, C. & Suarez-Orozco, M., 2009). The lack of reliable and valid assessment tools also leads ELL students to be disproportionally placed in high-incidence special education categories, such as LD or speech and language-impaired (Artiles, Rueda & Salazar & Higareda, 2005).

Beyond questions of validity of responses to the HLS, it has also been suggested that the limited data provided by the HLS fail to accurately identify a host of factors that are related to success in school. These environmental influences include family literacy practices, parental education level, socioeconomic status, number of years spent in the U.S., preschool attendance, preexisting program placement, generational differences in immigration status, and parental language use and preferences (Abedi, 2002; Abedi, 2008; Artiles, Rueda, Salazar & Higareda, 2005; Ballantyne, 2008; Betts, Bolt, Decker, Muyskens & Marston, 2009; Conger, 2008; Cosetino de Cohen, Deterding & Clewell, 2005; Hakuta, 1999; Hakuta, Butler & Witt, 200l; Keiffer, 2008; Reese, Garnier, Gallimore & Goldenberg, 2000; Samson & Lesaux, 2008; Suarez-Orozco, Rhodes & Milburn, 2009). More research is needed to examine the validity of the Home Language Survey and determine if incorporating these other background variables will improve accurate identification procedures.

Purpose of the Study

The purpose of this study is to investigate the influence of demographic background characteristics on the language proficiency and academic achievement of ELL students in elementary school. It is anticipated that information provided through the Bilingual Parent Interview (BPI) will have greater predictive ability to detect language and achievement problems than the limited amount of background information assessed by the HLS.

Research Questions:

This research sought to answer the following questions:

1. What demographic variables are associated with language proficiency and academic achievement among ELL students?

a. Are any of the demographic variables obtained from the BPI associated with students' language proficiency scores in both English and Spanish (as measured by the CELDT and the LAS-Links Español/Pre-LAS 2000)?

b. Are any of the demographic variables obtained from the BPI associated with students' academic achievement (as measured by the state-wide achievement tests from the STAR program)?

2. Is language proficiency in L1 and L2 associated with academic achievement?

3. Is the HLS associated with students' language proficiencies and academic achievement levels?

a. Is the HLS associated with student's language proficiencies in both English (a measured by the CELDT) and Spanish (as measured by the LAS-Links Español/Pre-LAS 2000)?

b. Is the HLS associated with student's academic achievement (as measured by the state-wide achievement tests from the STAR program)?

4. Are demographic variables from the BPI more strongly associated with language proficiency and achievement scores than the HLS?

CHAPTER 2

LITERATURE REVIEW

Definitions of Terms

English Language Learner (ELL)

Describes any student (in grades k-12) who is a non-native English speaker and who is in the process of acquiring the English language. This term signifies that the student may need some type of language support program in order to gain access to academic content in the classroom and can refer to students either eligible for or already enrolled in language support programs. (Ballantyne, Sanderman & McLaughlin, 2008; National Council of Teachers of English, 2008)

ESL (English as a Second Language)

Refers to language support programs for ELLs.   The term was previously used to identify ELLs in grades k-12 but now only refers to the instructional programs designed for these students. This instruction incorporates little or no native language instruction and is implemented during specific times of the day. When not in ESL, students may attend one of two types of classrooms: mainstream or self-contained bilingual classrooms. (National Council of Teachers of English, 2008; U.S. General Accounting Office, 2001).

LEP (Limited English Proficiency)

A term used by the U.S. Department of Education to designate ELLs who do not have adequate proficiency of the English language. This deficiency in English language skills

entails that the student cannot succeed in a mainstream classroom or achieve statewide achievement standards (National Council of Teachers of English, 2008).

Primary Language:

The language first learned by a student. For ELLs, this is the language most often used at home and spoken by the students' family members. The primary language is referred to elsewhere as "L1", "first" language, "mother tongue", "native" language, and "dominant" language. In this study, the primary language refers to the Spanish language (California Education Code Section 55000).

Second Language

The language being acquired by a student beyond their primary language. This term is frequently referred to as "L2". In this study, the second language refers to the English language (National Council of Teachers of English, 2008).

Demographic Characteristics

According to the last national census, taken in 2010, approximately 20.6% of the national population over five years of age (approximately 59.5 million people) spoke a language other than English at home (U.S. Census Bureau, 2010). This reflects an increasing trend, as the number of individuals over age five who spoke a language other than English at home grew from 18% in 2000, 14% from 1990, and 11% from 1980 (Shin & Bruno, 2003). The number of people who spoke a language other than English at home more than doubled between 1980-2000 (from 23.1 million to 31.8 million), while the overall population only increased by one-fourth during this same period (Shin & Bruno, 2003). Amongst all the

major language groups represented in the 2010 census survey, the majority of individuals (62.14%) who spoke a non-English language at home spoke Spanish (up from 60% in 2000), representing an approximate 37 million individuals (U.S. Census Bureau, 2010; Ramirez, 2004). According to the 2000 Census, the most commonly spoken languages after English and Spanish were Chinese (2.0 million speakers), French (1.6 million speakers) and German (1.4 million speakers; Ramirez, 2004).   It is evident from these statistics that the number of Spanish-speakers in the public schools is a pressing concern for educators, as the amount of services needed for these students will only continue to increase if these trends continue.

The 2010 Census identified 50.5 million (16% of the total population) individuals of Hispanic or Latino origin (Ennis, Rios-Vargas & Albert, 2011). In 2000, there were 35.3 million Hispanics in the United States (12.5% of the total population), representing a 43 percent increase (Ennis et al., 2011; Ramirez, 2004). In fact, the increase in the Hispanic population from 2000-2010 represents half of the total population increase in the entire country during these years (Ennis et al, 2011). In 2000, the largest Hispanic group in the U.S. was people of Mexican origin (59% of the total Hispanic population), followed by Other Hispanics (16%), Puerto Ricans (9.7%), Central American (5.1%), South Americans (4.0%), Cubans (3.5%), Dominicans (2.3%) and Spaniards (0.3%; Ramirez, 2004). In 2010, 63 percent of all Hispanics or Latinos were of Mexican descent, followed by Central Americans (7.9%) and South Americans (5.5%) (Ennis et al., 2011). While those of Mexican origin represent the majority of Hispanics in the United States, one should consider that there is a wide variability in this population and it is important to not assume homogeneity when assessing the research base.

Although the term Hispanic is not synonymous with Spanish-speaking status, it is true that over three-fourths of all Hispanics in 2000 spoke a language other than English at home, the overwhelming majority (over 99%) of which were Spanish-speakers (Ramirez, 2004). While 80.5% of the total population in 2007 spoke only English, the numbers were dramatically lower for Hispanics at 21.9% (U.S. Census Bureau, 2007). In terms of English language abilities, there is great variability amongst Hispanics in the United States. According to the 2000 census, approximately two out of every five self-identified Hispanic individuals spoke English less than "very well"; this number varied from 57% for Central Americans to 26% for Puerto Ricans and Spaniards (Ramirez, 2004). In 2010, only 44.7 % of Spanish speakers reported speaking English less then very well" (U.S. Census Bureau, 2010). However, approximately half of the Spanish speakers in 2000 and 2010 reported speaking English "very well" (Shin & Bruno, 2003; U.S. Census Bureau, 2010). These numbers improve among younger individuals, as approximately three-fourths of all Spanish speakers between the ages of five to seventeen reported to speak English "very well" (U.S. Census Bureau, 2010). Therefore, the profile of bilingual, Hispanic individuals in the United States is extremely heterogeneous, making generalizations difficult.

According to the National Clearinghouse for English Language Acquisition (NCLEA) website, there were approximately 5,074,572 ELLs with limited English proficiency enrolled in grades pre-K through 12 during the 2005-2006 school year, representing approximately 10.3% of total student enrollment ("Frequently Asked Questions", n.d.). Out of this group, approximately 76.9% of all ELL students in grades k-12 in public schools are Spanish speakers (Ballantyne, 2008). In general, an increasing trend in the number of ELLs in public schools is evident, as the ELL population (those designated as limited English proficient) has increased over 200% over the past fifteen years, with the

rate of all ELL, regardless of English proficiency status, enrollment surpassing the total rate of student enrollment by more than seven times (NCLEA, n.d.). In 2005, 5.4% of all school-aged children were identified as LEP, which is a considerable increase from 2.8% in 1979 (Fry, 2008). However, given the increases in the Hispanic population, these rates are expected to increase correspondingly and it is anticipated that an additional 5.4 million LEP students will be educated in the U.S. between 2005 and 2020 (Fry, 2008). This projection is based upon hypothesized immigration increases, as one in five children of immigrants have limited English speaking abilities compared to 1 in 100 children of native-born parents (Fry, 2008). In terms of distribution of LEP students across the nation, California had the highest number of public school students in 2005-2006 with 1,571,463. The other states with the largest number of LEP students include Texas (640,749), Florida (253,165), New York (203,583), Illinois (204,803), and Arizona (152,962). For this reason, California has had a long history in providing services to a great number of Hispanic, bilingual services and has been at the forefront of progressive educational practices in dealing with this group of students.

In a white paper funded by the U.S. Department of Education's Enhanced Assessment Grant, Evaluating the Validity of English Language Proficiency Assessments, Bailey and Kelly (2010) demonstrate that an efficacious screening and identification process for ESL instruction and identification is lacking in technical adequacy. In fact, the authors call for pilot studies to validate this process at the local level to investigate different versions of screening measures to improve the currently ineffective status quo. As Bailey and Kelly (2010) write: "Characterizing what is practical across states and what works best will be the first critical steps in creating a more valid, uniform and equitable system of access to English language services for all students in the Nation" (p.22). Therefore, an evaluation of a specific

procedure of utilizing a parent interview in order to obtain important background characteristics of students potentially in need of English language support services is an important contribution to the literature. It is hoped that results from this study will help educators choose better methods for this screening process, as educators have autonomy in selecting measures and procedures under *Title III* of *No Child Left Behind.*

In comparison to the general population, Hispanics are less likely to have completed high school or college, with only 52% of all Hispanics aged 25 and over earning a high school diploma and only 10% earning a higher education degree in 2000 (Ramirez, 2004). In 2007, 40% of all Hispanics failed to earn a high school diploma, compared to a national average of 16 percent (U.S. Census Bureau, 2007). During the same year, the percentages of bachelor's degrees earned for Hispanics (8.4%) was less than half of the national average (17.1%) (U.S. Census Bureau, 2007). In terms of family income, Hispanic families also tend to earn less than the average American--- in 2007, the median household income for Hispanics was $39,852 compared to the national average of $50,007 (U.S. Census Bureau, 2007). In fact, Hispanics under the age of 18 were the most likely to fall under poverty in 1999 in comparison to all other racial/ethnic categories (Ramirez, 2004). In 2007, almost one-fourth of Hispanic families with children fell under the poverty line, compared to a national average of 15.1% (U.S. Census Bureau, 2007). In addition, 50.5% of all Hispanics lived in renter-occupied housing in 2007 (compared to 32.7% total population; U.S. Census Bureau). Housing mobility rates were also higher for Latinos, as 83.4% of all U.S. citizens reported living in the same house as the year prior, compared to 80.2% of all Latinos (U.S. Census Bureau, 2007).

These statistics factor into student achievement, as schools with high concentrations of children from low-income families tend to have lower achievement levels than schools with children from higher-income families (Kosters & Mast, 2003). In 2000, 40% of all Hispanics in the U.S. were born in foreign countries (Ramirez, 2004). The majority of these immigrants arrived to the U.S. between 1990 and 2000 (46%), including a majority of the Mexican and South American immigrant populations within the U.S. (Ramirez, 2004). Thus, the influx of immigrants into the United States in recent years has intensified the challenges faced by public school personnel in providing services to these students. Incomplete educational records, attendance problems, educational gaps, instructional differences across schools, environmental stress, acculturation issues and lack of teacher training in cultural competence are some examples of barriers that may impede the abilities of school personnel to obtain a valid understanding of, and subsequently provide services for, these students.

Within regions with a large number of Latino individuals, ELL students are more likely to attend schools in central cities where, in general, students tend to have lower math standardized test scores than students in suburban or rural areas (Cosentino de Cohen, Deterding, & Clewell, 2005). Although it may be desirable to blame these schools for their students' low achievement scores, it is important to understand that schools face an enormous challenge in meeting the needs of ELL students. For instance, Kindler (2002) notes that ELL students are frequently placed in classrooms with larger teacher to student ratios. The average ratio of teachers to ELL students designated Limited English Proficient is 1 to 24. However, these ratios increase when teacher training is taken into consideration, as the average ratio of teachers certified in English-as-a-Second-Language services is 1:44 and 1:47 for teachers certified in bilingual education (Kindler, 2002). These data suggest that schools struggle to provide adequate teaching resources for ELL students. Furthermore,

although Hispanics tend to be found within certain regions of the United States, allowing for state and federal agencies to fund resources into these areas, a large number of Hispanic families frequently move within any given school year, thus creating a constant flux of LEP children in many schools (Office of the Secretary, U.S. Department of Education, 1991). Especially challenging to educators is the effort to track students whose parents' work is migratory, as students may have to leave a school after a short period of time in order to follow seasonal, agricultural work. Taken together, these issues make it difficult for educators in their efforts to monitor and evaluate students' progress and needs.

Socio-historical Context

Issues of multilingualism have been a central concern in the history of the United States since the inception of the nation. Throughout our history, language has played a central role in determining relative power and opportunities for social advancement (Wiley, 2005). This linguistic exclusion is a current that runs through our nation's history. It can be argued that this exclusion of the "other," as represented by linguistic dominance, is a central paradox of the American character: in a nation of immigrants, how do we define who is "American" and who is an interloper? Upon examination of the history of bilingual education, one can argue that a long-standing policy of English hegemony by the U.S. government has been a powerful weapon in forwarding the political and social dominance of Americans of Anglican descent.

Between the 17th and 19th centuries, the U.S. government implemented laws to guarantee the use of English by Native Americans and Hispanics in new territories in the Southwest (Nieto, 2009). In 1906, the Nationality Act outlawed any language other than English to be used for instruction in schools and mandated oral exams in English as a

prerequisite for U.S. citizenship. In 1917, the Burnett Act revised naturalization qualifications based upon English-language literacy tests. Soon after, hostility emerged against German speakers who had previously experienced linguistic autonomy in local schools (Nieto, 2009). As Crawford (1998) explains, the purpose of linguistic exclusion were twofold: to suppress individual rights in the effort to curb the growing power of workers unions and to implement a public-relations campaign to market the United States as a purely white nation.

Thus, it is evident that issues of power and social dominance run deep in the debate over bilingual education. In this way, individuals who do not speak English represent a large minority group at risk for institutional persecution. In order to progress beyond our history of exclusion and discrimination, we must progress past linguistic bias in our educational system to ensure equity for culturally and linguistically diverse learners in school. This next section will address the ways in which educational policy has shaped institutional discrimination against culturally and linguistically diverse students in the nation's public schools.

Historical Exclusion from Mainstream America through Overrepresentation/Disproportionality

Although the treatment of ELLs has been an ever-present tension throughout the history of the United States, the effort to remediate the unequal treatment of ELLs in public schools is a relatively recent phenomenon. According to the National Education Association (NEA) Policy Brief titled "Disproportionality: Inappropriate Identification of Culturally and Linguistically Diverse Children," research suggests that:

> A child's race and ethnicity significantly influence the probably that he or she will be misidentified as needing special education and that disproportionality can have an immediate and long term negative effects. Labeling students as disabled when they really are not leads to unwarranted services and supports. Misidentified students are likely to encounter limited access to rigorous curricula and diminished expectations.

And, more importantly, it creates a false impression of the child's intelligence and academic potential. (National Education Association, 2008, p. 1)

The NEA research brief lists a host of reasons for this institutionally created handicap, including the fact that once identified, students tend to remain in special education classes where they are apt to receive a more limited curriculum. Also, as a result of placement in special education, students can absorb the message of lowered expectations and subsequently less opportunities for academic advancement and higher-paid jobs (NEA, 2008). Socially, ELL students in special education programs tend to be isolated from those who are more "academically able," and are often stigmatized for their Special Education status, as well as segregated from students of other ethnic and racial backgrounds (NEA, 2008, pg 1-2). The data on the overrepresentation of ELLs in special education in the U.S. are alarming. According to Fry (2008), "recent results from national and state assessments indicate that ELL students are among the groups least likely to meet state proficiency standards. One of the fastest growing groups of students is also one of the lowest-achieving student groups in both math and reading" (pg 2). Despite recent national efforts to level the playing field in the wake of NCLB legislation, the majority of ELL students who took state assessment tests scored below proficiency standards, falling behind every other racial/ethnic group in elementary school and continue to fall even further behind through middle and high school (NEA, 2008). According to Gandara, Rumberger, Maxwell-Jolly and Callahan (2003), "highly vulnerable" English language learners (i.e. those with low proficiency in both their primary and secondary language) are 1.5 times more likely to be diagnosed as Speech Impaired and Learning Disabled than their English speaking peers during the elementary school years. This trend only worsens during high school, when these students are twice as likely to be diagnosed as Intellectually Disabled, Speech Impaired and Learning Disabled

(Gandara et al., 2003). This trend exists despite the fact that the majority of ELL students are immigrants or children of immigrants, a group which has been shown to be more academically ambitious than native-born students (Suarez-Orozco, C. & Suarez-Orozco, M., 2009).

A major reason for this discrepancy between the achievement of ELL students and their monolingual peers is the fact that it is difficult to find reliable, valid measures that clearly differentiate between a reading and/or language disability and the existence of a language delay. For example, as Ballantyne (2008) observes, monolingual students who exhibit a significant discrepancy between general nonverbal intelligence scores and low verbal scores are often identified as having a reading disability look very similar on the outside to ELL students in the process of acquiring a second language. Therefore, ELL students are often misdiagnosed, leading to two common and detrimental outcomes for ELLs: their "ability to speak and understand English is overestimated while their general cognitive and social abilities are underestimated" (Ballantyne, 2008, pg. 33).

Changes to Federal Law

As part of an ongoing effort to eradicate racial and ethnic discrimination, federal legislation has progressively moved toward a more fair and equitable treatment of minorities in the United States. In terms of the rights of limited English proficient speakers, several key pieces of legislation and federal and state court cases have set the foundation for these efforts and provide the major guidelines and requirements for the treatment of ELL students in schools.

Title VI of the Civil Rights Act of 1964 & Title VII of the Elementary and Secondary Education Act (ESEA).

With the passage of Title VI of the Civil Rights Act of 1964, it became

unconstitutional to discriminate against any individual on the basis of race, color or national origin in any program that receives federal funding (Ragan & Lesaux, 2005). Four years later, in 1968, the Congress passed the Bilingual Education Act (BEA) as Title VII of the Elementary and Secondary Education Act (ESEA). According to the Department of Education, Office of the Secretary report, "The Condition of Bilingual Education in the Nation: A Report Card to the Congress and the President" (1991), the main drive for the creation of Title VII was to provide funding for Local Education Agencies (LEAs) for bilingual instruction. As part of this legislation, the term "limited English proficient" was created to help educators identify students who could not benefit from mainstream education due to linguistic difference.

Key Supreme Court Cases

Following the legal mandates set by congress in the 1960s, several key Supreme Court cases provided specific interpretations of these laws as they pertained to the treatment of ELLs in U.S. public schools. The next section will address these cases in detail.

Lau v. Nichols (1974). Although the Civil Rights Act of 1964 provided the constitutional basis for fair and equitable treatment of culturally and linguistically diverse students in America's public schools, it was not until 1974, in the Supreme Court case of Lau v. Nichols, that the laws took tangible meaning (Ragan & Lesaux, 2006). Following the Lau vs. Nichols (1974) decision, it was determined that children from linguistic minority backgrounds had the same rights as students from language majority backgrounds (e.g. English) to participate in the public education system. Mirroring the tenants of Brown v. Board of Education (1954), the consent took a position against a "separate but equal" education for limited English proficient students. As part of the consent decree, the OCR mandated that Local Education Agencies take "affirmative steps" to ensure that non-English

speaking students have equal opportunities to participate in the school curriculum. Subsequently, this action spurred the development of measures to reliably identify students in need of English language instruction (Bailey & Kelly, 2010).

Castañeda v. Pickard (1981). The Supreme Court Case of Castañeda vs. Pickard (1981) set another important standard for the education of ELLs. The case involved the father of two Mexican-American children in a school district in Southern Texas. The father, Roy Castañeda, argued that the school district discriminated against his children on the basis of ethnic and racial discrimination by placing his children in segregated classrooms that grouped children based on discriminatory criterion. In this ruling (which set the stage for the "Castañeda test"), the Supreme Court intended to outline policy to ensure quality evaluation of ELL programs through "sound educational theory," providing sufficient resources and teachers and the termination of failing programs (Ragan & Lesaux, 2006, pg. 8). The ruling also stipulated a definition of a "meaningful opportunity to participate" in education, as stated in the following passage:

> "In order to be able ultimately to participate equally with students who entered school with an English language background, the limited English speaking students will have to acquire both English language proficiency comparable to that of the average native speak and to recoup any deficits which they may incur in other areas of the curriculum as a result of this extra expenditure of time on English language development" (Castañeda v. Pickard, 1981)

According to Ragan and Lesaux (2006), the result of this ruling ensured that language minority students maintain the right to an equitable education in all learning content areas despite their need to obtain additional language support services. In 1991, the Office of Civil Rights extended the Castañeda ruling to address the needs of ELLs who acquire English language skills but are still at-risk for academic failure. Under the "Castañeda ruling", remedial action may be required in order to address the academic deficits that LEP students may acquire as a result of intensive language training in order to ensure students

equal participation in regular instruction (Castañeda v. Pickard, 1981).

Titles III and I of NCLB (2002). In 2001, Congress passed NCLB, which included Title III, *Language Instruction for Limited English Proficient and Immigrant Students.* Title III included many important provisions to account for the achievement of Limited English Proficient students, including: a requirement by districts to report the number of Limited English Proficient who attain English proficiency, to report the number of Limited English Proficient students who pass state academic achievement levels, to monitor the progress of ELL students who have been reclassified as Full-English Proficient (FEP) and to establish "annual measurable achievement objectives" (AMAOs) for the ELL students (Ragan & Lesaux, 2006). In exchange for following these guidelines, districts would be given increased flexibility in how to spend federal funds so long as the district meets annual measurable achievement objectives for four consecutive years (Office of Elementary and Secondary Education, 2007). In terms of assessment, this flexibility often leads to confusion, as it becomes virtually impossible to make comparisons between the progress of ELLs in various settings, given the fact that there is no underlying common basis for comparison. In addition, while some school districts may use the flexibility in order to implement effective programming and assessment practices, other districts may utilize ineffective policy procedures without federal censure. This situation has had grave effects for many ELLs who struggle to achieve academic success.

Title I of the No Child Left Behind Act of 2001. Title I of NCLB, *Improving the Academic Achievement of the Disadvantaged*, also contains important provisions for the education of ELLs. As part of the push toward "adequate yearly progress," specific designations were made in terms of the assessment and progress monitoring of ELLs. Under Title I, it is required to test ELL students in the same way as native English speakers after being enrolled in U.S.

schools for more than one year in the effort to provide standardized measures of

accountability (Office of Elementary and Secondary Education, 2007). Under these

provisions, ELLs can be assessed in their native language for up to five years and on an

individual basis for up to three years. However, under this ruling, it is up to each state and

district to develop and maintain a system for the evaluation of English language proficiency

(Ragan & Lesaux, 2006). In light of this stipulation, the fact that many states continue to fail

to implement fair and appropriate language proficiency evaluations can be understood.

Non-Regulatory Guidance

Federal law requires that states and districts ensure the progress of ELLs English

language proficiency and academic progress. However, the amorphous nature of the federal

policy allows for states and districts to determine assessment and monitoring policies

idiosyncratically (Ragan & Lesaux, 2006). This means that all details of assessment, including

operational definitions of classifications and the types of tests and data to use, are

determined on an individual basis by each state/district (Ragan & Lesaux, 2006), thus

thwarting efforts to even compare populations of ELLs across district lines within a single

state. Without a cohesive and comprehensive federal model, states struggle to develop

adequate assessment practices with differing levels of success. For example, New York City

automatically evaluates all students with Hispanic surnames, while those ELLs without

"ethnic-sounding" surnames are evaluated only after demonstrating significant problems in

the classroom (Burnett, 1993), at which point the likelihood of successful intervention is far

less probabilistic.

Recently, the Arizona Department of Education (ADE) drew fire for changes made

to their states' HLS policy. In 2009, the Arizona Department of Education implemented a

new revision, eliminating the previous three questions in favor of a single question: "what is

the primary language of the student?" (Goldenberg & Rutherford-Quach, 2010). In the only known empirical study to date examining the predictive validity of the HLS, Goldenberg and Rutherford-Quach (2010) compared English-as-a-Second-Language placement decisions pre- and post-revisions to the law as it pertained to potential under identification for services. The issue of the newly revised HLS in Arizona came to light as it pertained to *Hornes v. Flores* (2009), a U.S. civil action case involving parents' allegation of civil rights violations regarding ESL instruction. Based on their research in two districts in the state, the researchers found that 11 to 18% of those students who would have qualified for ELL services under the previous law no longer were identified for screening under the new measures. The report also indicated that a "fail-safe" measure put in place by the state to allow teachers to nominate students for screening failed to accurately capture the number of students who would have been overlooked under the new measures (Goldenberg & Rutherford-Quach, 2010). Ultimately, the one-question HLS was ruled unconstitutional by the U.S. Department of Education's office for civil rights (OCR) (Curriculum Review, 2011).

In the next section, specific procedures to screen, identify and classify ELLs will be described.

Screening Procedures to Identify Students in Need of language support services

As previously explained, the lack of federal mandates for identification of ELL students for language assessment evaluations means that states that receive Title VII funding may utilize their own discretion in determining identification procedures. In a report funded by the Office of English Language Acquisition, Language Enhancement and Academic Achievement for Limited English Proficient Students titled "Survey of the states LEP and available educational programs and services 2000-20001 summary report", Kindler (2002)

surveyed the identification and classification procedures used by all fifty states. In general, a great majority (over 80%) of the states used multiple criteria for screening students, including a combination of a home language survey, teacher observations and interviews and parent information in initial screening for language evaluations. Sixty percent of states used student records and grades, informal assessments and teacher referrals (Kindler, 2002). Although procedures are outlined well in some states, in other instances, states have no requirements or recommendations for the identification of ELL students (O'Malley & Pierce, 2004). This lack of strong policy mandates leaves the field wide open for the existence of bad practice without adequate scrutiny.

However, it is difficult to make a determination of bad practice, as the variance of procedures used by states makes it hard to make meaningful comparisons between states that utilize effective procedures and those who fail to accurately identify ELL students in need of instructional support services. For example, Clements et al. (1992) note that varying operational definitions of ELL students with limited English proficiency has led to unreliable data in terms of the sheer numbers of students who need support. Given the inconsistencies in identification procedures, students are often inappropriately assigned to either regular education or special education classrooms, leading to poor academic outcomes. Furthermore, when ELL students are not identified properly, states may lose the opportunity to receive federal funding to provide proper supports (O'Malley & Pierce, 2004). These factors compound the challenges facing educators in providing efficacious educational services to ELL students who are at-risk for academic failure.

Despite the lack of commonality in identification procedures across states, the use of a Home Language Survey (HLS) prior to matriculation into a public school is used in the vast majority of states. According to Bailey and Kelly (2010), the only states who do not

mandate the use of a HLS are Louisiana, Nebraska, and South Dakota. Within states, the practices within Local Education Agencies vary: 20 states utilize a statewide form for every district, 18 states use a statewide form but are allowed to revise it or discard it for a different version altogether, and four states use a sample form but districts are instead directed to make their own (Bailey & Kelly, 2010). The survey asks questions regarding the use of and preferences of non-English languages in the students' homes. For example, the HLS used by the participating school district is as follows:

1. Which language did your child learn when he or she first began to talk?

2. What language does your child most frequently use at home?

3. What language do you use most frequently to speak to your child?

4. Name the language most often spoken by the adults at home (Participating School District, n.d.)

However, the number of questions varies significantly by state and by district. For example, until recently, Arizona mandated the use of only one question ("what is the primary language of the student?), while New York's version includes twelve questions (Bailey & Kelly, 2010).

If a parent indicates the use of a non-English language on any question on the HLS, then students are considered to be ELL and are given an assessment of English language proficiency and, in a minority of cases, an assessment of native language proficiency. According to Kindler (2002), over 89% of states in 2000-2001 utilized this instrument. In some cases the HLS is required, while in other instances it is recommended by a particular state or district (O'Malley & Pierce, 1994). Also, the HLS may serve as a pre-screening tool in some states (e.g. indication of home language other than English qualifies for further evaluation), while in other instances it serves as one part of a multi-criterion screening process (Ragan & Lesaux, 2006). The utility of the HLS has been called into question in

recent years, as parents may provide inaccurate responses due to a feeling that their child will receive an inferior education in bilingual classes, miscomprehension of the questions asked on the survey, issues of illiteracy or poor English reading comprehension, and fears of providing information to government agencies may result in jeopardization of their family's immigration status (Abedi, Lord & Plummer, 1997; Burnett, 1993; Clements, Lara & Cheung, 1992; Ragan & Lesaux, 2006). It has also been suggested that schools do not adequately explain educational programming alternatives to parents of school-aged ELL children, thereby limiting the ability of parents to select the best program to fit their child's needs (Gandara et al., 2003). For these reasons, it has been suggested that a parent interview conducted in-person by school personnel may result in the collection of more accurate data to make pre-screening decisions (Clements et al., 1992). For example, school psychologists and speech and language pathologists with the participating school district have provided personal interviews in either English or Spanish for incoming parents into the district as a way to build rapport with parents and ensure more accurate and in-depth information to inform identification procedures.

Use of Tests of Language Proficiency as part of Classification Procedures for ELL status

As Clements et al. (1992) state, a large number of states fail to distinguish between screening and classification procedures, further confounding the ability to accurately identify students in need of remedial language support. In general, once an HLS has been conducted and a student has been deemed eligible for language assessment, states utilize a variety of assessments to determine the students' language proficiencies. While the use of an HLS and a language proficiency test are common practice, there is wide variability in the type of language assessments used by states. However, in most cases, the same language tests are used for both identification and classification purposes in individual states and districts

(Kindler, 2002). Among the commonly used language tests, the Language Assessment Scales (LAS) are used by 85% of states that use language tests, followed by the Idea Proficiency Test (IPT) and the Woodcock Muñoz Language Survey (WMLS) (Kindler, 2002). In a survey of 34 Eastern states, O'Malley and Pierce (2004) found that 13 states required an English Language Proficiency (ELP) test, 13 states recommended an English Language Proficiency test, while only five states required a language proficiency test in the child's native language. The failure to evaluate students' abilities in their dominant language can mask students' true abilities.

In general, there is a lack of consensus regarding the validity and reliability of language assessment tests used by states to determine ELL status. Considering the autonomy granted to states in creating identification and classification procedures, there is a large variability in what tests are used as well as the cut-off scores used to determine ELL status from state to state and even within districts (Kindler, 2002). For example, Zehler (1994) reviewed a large number of commonly used language proficiency tests and found major differences in all language tests by content, structure, theoretical bases, administration procedures, and validity and reliability estimates (as cited in Abedi, 2008). This makes it difficult to compare the utility of various language proficiency scores in making classification determinations. Furthermore, there is a question as to whether or not the tests accurately identify Limited English Proficient students. For example, Abedi (2005) found a weak relationship between language proficiency test scores and statewide achievement tests and designations of LEP status in four large sites. The author found a negatively skewed distribution of the LAS, suggesting that the test does not have enough power in the upper ranges to accurately assess students' language proficiency statuses. These results indicate that ELP and standardized achievement tests may not be sufficient in predicting students'

Limited English Proficient status. Instead, Abedi (2005) suggests that multiple criteria be used to make Limited English Proficient classification decisions, including amount of time spent in U.S. classrooms and amount of time spent in English-only instruction. The general consensus on the efficacy of language proficiency tests is mixed regarding their ability to sufficiently predict academic skills needed to succeed in mainstream classrooms (Bailey & Butler, 2003; MacSwan & Rolstad; 2006; Yzquierdo, Blalock, & Torres-Velasquez, 2004).

Use of Standardized Achievement Tests as Part of Classification Procedures for ELL Status

NCLB mandates that schools measure students' English Language Proficiency in the four domains of reading, writing, speaking and listening across academic and nonacademic topic areas that are in alignment with state content standards (Abedi, 2008). For this reason, many states also use standardized academic achievement tests as part of multi-criterion classification process as well as for determinations regarding re-entry into mainstream classrooms. In general, students must demonstrate both oral and English proficiency before they can be considered to be full English proficient (FEP) and thus able to enter into mainstream classrooms. Many researchers have various concerns with the use of norm-referenced achievement use with ELL students, such as the fact that norming samples usually do not include ELLs, translations may inaccurately reflect the content being tested, and ELL students often attend racially/ethnically/linguistically segregated schools that do not adequately provide the quality of instruction necessary for high levels of performance (Abedi, 2008; Hakuta, Butler et al., 2000; Suarez-Orozco, C. & Suarez-Orozco, M., 2009). Also, there is no consensus as to the criterion used to determine ELL classification with tests of achievement, as states use a variety of cut-off scores to make determinations (Abedi, 2008). In a large-scale study of four sites comprised of over 700,000 students, Abedi (2002) investigated the linguistic bias in English Language Proficiency tests through an examination

of academic achievement tests--- specifically the Iowa Test of Basic Skills (ITBS) and the Stanford Achievement Test, 9th Ed. (SAT-9) as external criteria. Results indicated that the performance gap between ELL and non-ELLs increased as a function of the language demands of the tests administered. The gap also increased as a function of grade, with ELL students falling further behind their same-aged non-ELL peers in higher grades (Abedi, 2002). The author suggests that assessments therefore take language background characteristics into consideration, as student performance was predicated upon language variables (Abedi, 2002). There has been some promise in newly developed tests created post-NCLB in reducing linguistic bias; however, overall results are mixed (Abedi, 2008; Albers, Kenyon & Boals, 2009). For this reason, it has been suggested that standardized achievement should not be used in classification determinations, either alone or as part of multiple-criterion (Abedi, 2008).

In response to questions regarding the utility of screening measures, language proficiency tests and standardized achievement tests, many researchers are critical of the policies and regulations utilized by states and districts in determining ELL status. In general, states utilize a wide variety of assessment procedures in re-designating an ELL as fully English proficient (R-FEP). Test developers have made efforts to streamline the process post-NCLB by providing performance level descriptors ranging from 1 to 5, with 1 representing lack of English Language Proficiency and 5 representing full English Language Proficiency. In this way, states can use the newly developed English Language Proficiency tests to re-classify students as fully English proficiency if they score 4 or higher, despite variations amongst the criteria for performance level indicators between these assessments (Abedi, 2008). However, Ragan and Lesaux (2006) believe that the criteria for entry and exit into ELL programs are too general, with too much emphasis placed on measures of English

language proficiency. Similarly, Abedi (2008) finds that re-classification procedures rely too heavily upon measures of language proficiency at the expense of data regarding students' long-term academic achievement. In this way, states fail to accurately monitor the academic progress of ELLs, an important component to any intervention effort. Therefore, a student may continue to exhibit academic difficulties due to underlying language delays despite having reached an adequate level of English language proficiency on standardized tests. The inconsistencies in federal, state and district policies regarding the identification of ELL students therefore have a profound impact on the educational outcomes of these students. Without adequate research into the effectiveness of such policies, ELL students continue to be at-risk for inappropriate educational placement and academic failure.

Suggestions for Best Practice

A number of suggestions have been made to improve federal, state and district policy. Among these recommendations are: setting universal statewide requirements for identification and classification of ELLs, improved progress monitoring of language proficiency and academic achievement of non-Limited English Proficient ELLs and fully English Proficient ELLs in both the students' native languages and second languages, and increased inclusion of multiple assessment measures on state-wide tests (Abedi, 2003; Abedi, 2008; O'Malley & Pierce, 2004; Ragan & Lesaux, 2006). To this effect, researchers now call for more studies on the predictive factors of academic achievement for ELL students, as efforts to implement a universal screening approach may improve schools' abilities to target students in need of services before academic difficulties may become too entrenched to be remedied. In addition, it would be prudent to conduct studies examining the academic trajectories of ELL students already identified for special education and compare the background characteristics of those who exit out from those who retain the need for

specialized instruction. For example, Abedi (2008) suggests that schools examine a greater number of student background characteristics as part of the identification process. Such a process should theoretically help educators discriminate between those ELL students who truly need special education and those whose language acquisition development impedes their academic functioning in the short-term. These factors to be examined would extend beyond the limited amount of information provided by parents in the Home Language Survey. Similarly, Clements et al. (1992) argue for revisions to the HLS in an effort to tap into a greater understanding of students' language profiles and subsequent educational needs. Their recommendations include: obtaining information regarding the students' place of birth, first language obtained, educational experience in all languages and educational backgrounds. In addition, Clements et al. (1992) recommend that schools conduct the HLS in-person in the parents' native language when necessary, clearly articulate the reason for the use of the HLS, guarantee the parents of their child's legal rights to education despite immigration status as well as articulate the confidential nature of their answers. It is hoped that following these recommendations will lead to more accurate responses by the parents as well as the inclusion of pertinent information related to the students' educational needs. These suggestions provide impetus for the current study, as it is hypothesized that parents' responses to a bilingual parent interview will improve schools' identification capabilities as part of a preventative effort to accurately discern between students referred for special education who truly need these services.

Theories of Second-Language Acquisition

According to Bialystok (2001), there are two major approaches to linguistic theory: formal and functional perspectives. Formal theories posit that internal mechanisms result in linguistic ability, leading to uniform patterns of language development (Bialystok, 2001).

Conversely, functional theories rely on a belief that external events precipitate language development (Bialystok, 2001). In this view, children acquire language through social interactions, which later develops into formal language rules (Bialystok, 2001). These paradigms have been in play since the turn of the twentieth century, a time in which America witnessed a surge in immigration and began to grapple with issues of inclusion of ethnic minorities. During this time, two different camps sought to explain the low performance of immigrants on newly developed intelligence tests. Psychologists, such as Lewis Terman, who ascribed to a hereditary view of intelligence, posited that poor performance was a result of inferior genetics while environmental psychologists determined that low intelligence was a direct result of "mental confusion" caused by bilingualism (Hakuta, 1986). During the 1950s and 1960s, when theories of "cognition" became prevalent in the social sciences, other researchers started to examine the interaction between bilingualism and academic achievement. Looking at the low performance of bilingual children on verbal measures of intelligence, many researchers concluded that bilingualism caused a "language handicap" resulting in inferior intelligence and academic success (Peal & Lambert, 1962). One of the most prominent researchers of the time hypothesized a "balance effect" whereby instruction in a native language was believed to result in the loss of meaningful comprehension of subject matter (Cummins, 1979). This line of research was important in contributing to the popularity of a "negative theory of bilingualism" in which bilingualism was viewed as a source of "mental confusion" (Cummins, 1979). This research has helped to support state and federal efforts to eradicate dual-language instruction and promote an "English only" agenda in the public schools. This is evident in the Prop 227 legislation in California, a mandate that has helped create a situation in which the majority of ELLs are denied access to native-language instruction during their language acquisition phase.

At the same time that the theory of "negative" bilingualism gained in popularity, other researchers found evidence for an "additive" perspective in which students are able to acquire a second language without the risk of loss to their proficiency in their first language (Cummins, 1983). A major turning point in this direction was Peal and Lambert's (1962) study comparing monolingual and bilingual students in Montreal. The authors tested groups of ten-year old students on measures of both verbal and nonverbal intelligence and compared the performance between monolingual and bilingual subjects. Bilingual students performed significantly better on all measures as compared to their monolingual same-aged peers (Peal & Lambert, 1962). In fact, Peal and Lambert argued that the experience of bilingualism results in increased mental flexibility as compared to those who only experience life in one language.

Since Peal and Lambert's seminal study was published, a number of investigations have come out in support of the theory that bilinguals benefit from a "language asset" (Bialystok, 2001). Evidence exists that processing of both languages remains active for the bilingual individual when engaging in either their native language (L1) or their acquired second language (L2) (Grainger, 1993; Grainger & Dijkstra, 1992; Guttentag, Haith, Goodman & Hauch, 1984 as cited in Bialystok, 2001). It has been found that bilinguals are able to inhibit information in the frontal lobe of the brain in order to tune one's attention to the information presented in the relevant language in any given situation (Green, 1998; Kroll & DeGroot, 1997 as cited in Bialystok, 2001). In fact, it has been found that bilingual children significantly outperform their monolingual same-aged peers in areas of attention and inhibition (Bialystok & Majumder, 1998 as cited in Bialystok, 2001). While this advantage disappears around eight years old (Bialystok & Majumder, 1998 cited in Bialystok, 2001), it is possible that this early exposure to superior processing may carry over into

different domains (Bialystok, 2001). Conversely, the effort needed to inhibit language

processing may slow down the retrieval process for bilinguals under the age of five if the two

languages do not share a similar orthography (Bialystok, 2001). Thus, the research remains

mixed as to whether or not bilingualism itself promotes or retards cognition. Yet it is

difficult to compare the research, as major methodological differences (e.g. demographics of

sample participants, type of instruction, measures, etc.) abound that diminish the ability to

generalize findings.

These findings highlight an important point, namely that the accumulation of various

social, economic and socio-political influences on an individual life have a large effect on

students' intellectual and linguistic capabilities. Language proficiency is contextually driven,

depending on the individuals' specific needs for communication. Furthermore, development

of language proficiency is influenced by a number of antecedent events according to

Bialystok (2001), including: extent of literacy in the home and the community, second

language use in the community, language proficiency in the dominant language, specific

functions of the second language, and degree of identification with the speakers of the

second language.

The shift toward a more nuanced perspective of language proficiency has challenged

researchers to define linguistic proficiency in measurable terms in order to account for the

wide variability of bilingual children in measures of intelligence and academic achievement.

A major reason is that fact that bilingualism is highly variable. Bilingualism has been

described as a scale, with lack of awareness of other languages on one end to total fluency in

two languages on the other end (Bialystok, 2001). Two major theories attempt to account

for the discrepancy in language proficiency evidenced in bilinguals: the "theory of

interdependence" and the "threshold hypothesis". The theory of interdependence

hypothesizes that the interaction between the processing of two distinct languages causes a

distinctly different pattern of language acquisition and development as compared to the

language development of the monolingual child (Paradis & Genesse, 1996). Following this

idea, Cummins' (1979) threshold hypothesis helps to explain the theory of interdependence,

as his was the first attempt to quantify the varying levels of linguistic proficiency in

individual bilingual children in terms of the effects upon academic achievement. Cummins

(1979) identified three types of bilingualism based on the relative proficiency between L1

and L2: *limited bilinguals* who lack age-appropriate language skills in both L1 and L2; *partial*

bilinguals who demonstrate age-appropriate proficiency in both L1 and L2; and *full bilinguals*

who have achieved mastery in both L1 and L2. This distinction between relative levels of

proficiency helps to account for the mixed results of bilingual children on measures of

academic achievement. In this way, adequate competence in language proficiency in both

languages is the crucial factor in determining whether a bilingual child will suffer from

cognitive deficits or benefit from cognitive advantages (Cummins, 1979). Following this

theory, a bilingual child who has met or surpasses a threshold of language proficiency

should, theoretically, be able to develop language skills in both languages at or above their

monolingual peers.

In line with these theories, Cummins (1984) distinguished between two types of

language proficiency: basic interpersonal communication skills (BICS), or the ability to utilize

linguistic resources to communicate in social settings, and cognitive academic language

proficiency (CALP), or the ability to render deeper meaning from language necessary for

academic success. Research supports this distinction, as multiple studies have demonstrated

that it takes children two to three years to acquire basic interpersonal communication skills

and five to seven years to acquire cognitive academic language proficiency (Collier, 1989; Conger, 2008; Ferdman & Hakuta, 1985; Hakuta, Butler & Witt, 2000). From this viewpoint, children must be able to establish cognitive academic language proficiency in at least one language in order to surpass the threshold needed to tap into cognitive processes needed to generalize cognitive resources needed to succeed in the classroom (Cummins, 1979).

Other researchers have referred to the failure to meet an underlying linguistic threshold as "semilingualism," a term that refers to "less than native-like command of the vocabulary and syntactic features of a child's first and second languages" (Artiles & Klinger, 2006). Likewise, Bialystok (2001) believes that children are at risk for reading difficulties because they don't have sufficient background knowledge in their second language. Although children in these situations may be able to achieve native-like oral skills, they are at a great risk for failing to achieve high levels of literacy because they began their literacy development at a handicap caused by beginning their literacy development in a weaker language (Bialystok, 2001). This theory has been supported in many research studies. For example, Artiles, Rueda, Salazar and Higareda (2005) examined patterns of placement in special education in eleven urban school districts. They found that ELL's with limited proficiency in both native and second languages as a group had the highest rates of identification for special education. Furthermore, they concluded that the ELLs in "immersion programs," or instruction that was taught through the medium of English, had the highest likelihood of special education placement over any other instructional condition (Artiles & Klinger, 2006).

In recent years, the theory of interdependence has expanded into research on the cross-linguistic relationship between native and second languages. For example, Reese, Garnier, Gallimore and Goldenberg (2000) conducted a longitudinal study of Hispanic children from kindergarten through eighth grade. They found that Spanish literacy at the beginning of kindergarten was a significant predictor of English reading ability at the end of eighth grade. However, the authors determined that when early literacy in the native tongue was combined with early demonstration of English oral proficiency, students were significantly more likely to maintain reading skills in Spanish, shift faster to reading in English, and measures of Spanish reading, transition more quickly to reading English text and accomplish greater levels of English reading proficiency in middle school (Reese et al., 2000).

One explanation for the advantage conferred upon bilingual children with literary experience in their native language has to do with the development of pre-literate skills. For example, many predictors of English literacy skills include aspects of pre-literate skills in Spanish above and beyond English oral skills. These second language factors include phonological awareness, vocabulary knowledge, knowledge of letter-sound relations, and time spent being read to in one's native language at home (Genesee, Lindholm-Leary, Saunders & Christian, 2005; Reese et al., 2000). As part of the National Literacy Panel on Language-Minority Children and Youth, August, Shanahan and Escamilla (2006) determined that language-minority children do, in fact, achieve similar levels of word-level reading, such as decoding and spelling, as compared to their same-aged, monolingual peers. However, when compared on measures of text-level skills, such as reading comprehension, the panel found that bilingual students performed significantly lower than their monolingual colleagues (August et al., 2006). This evidence supports Cummins' theories, as it is possible that

students who are able to decode text with basic interpersonal communication skills can still struggle to extract meaningful context from language without a minimum threshold of cognitive academic language proficiency in either language. Other predictive factors include difficulty of text and degree of understanding of specific cultural aspects of the second language (see review in Bialystok, 2001). Although evidence is limited in terms of the impact of socio-cultural factors on achievement levels, more research is needed to explore this issue.

Factors that Predict Achievement of ELL students

Ethnicity. As previously mentioned, Census bureau statistics indicate that only 27.8% of Hispanic/Latino individuals earn a high school diploma and only 3.9% obtains an advanced degree (U.S. Census Bureau, 2007). Data indicate that Hispanic students have the largest high school dropout rates and lowest college enrollment rates when compared to students of other ethnic and racial backgrounds (Huber, Huidor, Malagon, Sanchez & Soloranzo, 2006). Hispanics children were at the second greatest risk of falling under the federal poverty level in 2010 behind Black children and constituted one-third of all children living in poverty (Mccartney, 2010). It has been stated elsewhere that children from low socioeconomic backgrounds generally achieve lower academic achievement than their same-aged peers from wealthier families (Kosters & Mast, 2003) and that educational outcomes are linked to future indicators of wellbeing (Suarez-Orozco & Sattin, 2007). One must keep in mind that Hispanic students have historically been excluded from the benefits of mainstream general education and are at a disproportionate risk for being identified as needing special education services. Taken together, these factors allow for a reasonable

hypothesis that Hispanic students are at-risk for academic difficulties based on confounding variables related to their ethnic status.

Socioeconomic Status. Research from multiple sources has added to our understanding of the influence of socioeconomic status on the academic achievement of ELLs. Data indicate that ELLs from lower socioeconomic backgrounds are more likely to be placed in special education, are less likely to achieve higher levels of academic success, and are less likely to obtain higher levels of English language proficiency, and are less likely to have benefited form preschool instruction (Abedi, 2002; Artiles, Rueda, Salazar & Higareda, 2005; Ballantyne, 2008; Department of Education, 1992). A common barometer of socioeconomic status is educational levels achieved by the members of a family and indeed, ELL students are more likely than their monolingual peers to be raised in households where the parents do not hold an advanced educational degree (Ramirez, 2004; Ballantyne, 2008; U.S. Census Bureau, 2007). It has been found elsewhere that Latino students' school readiness is influenced by parental education levels, as students with parents with low educational backgrounds are at greater risk of academic failure (Suarez-Orozco, Rhodes & Milburn, 2009). Therefore, one can predict that ELLs from low SES backgrounds, as indicated both my parental poverty and low educational attainment, will be at risk for academic failure. For this reason, it is important to examine demographic characteristics of student backgrounds related to SES as part of a comprehensive screening process for special education referrals.

Time Spent in the U.S. & Immigration Status. Although the research is fairly conclusive in regards to the impact of ethnicity and socioeconomic status on ELL student achievement, the research is mixed in terms of the influence of the amount of time spent in the U.S. The

theoretical basis for much of the research in this area rests upon research on the amount of time (approximately 5-10 years) needed to obtain cognitive academic language proficiency, or CALP (Collier, 1989; Cummins, 1981; Hakuta, Butler & Witt, 2000). In a longitudinal study of 1,800 identified as ELL in kindergarten in two large California school districts, Hakuta, Butler and Witt (2000) found that it took these students on average 3-5 years to obtain oral proficiency and 4-7 years to obtain academic English proficiency. However, the authors prefaced that these results are likely to underestimate the amount of time needed by most ELLs, as the students in their sample benefited from early identification (Hakuta et al., 2000). In another longitudinal study examining the effects of time on ELL students, Conger (2008) investigated the rate of English language acquisition as function of age of entry into U.S. public schools through an examination of school records of ELLs in grades one to eight in four different sites in New York City public schools. Results indicated that 25-30% of students required only one year to become minimally proficient in English, while over half reached this level within three years of entering a U.S. school. Differences in English proficiency as a function of age of entry were also found, as the average amount of time needed for EP was 1.69 years for five-year old students and 3.87 years for ten-year old students. These age of entry effects remained even when SES and school-level demographics were controlled (Conger, 2008). Further studies are needed to clarify these distinctions and to determine accurate trajectories for acquisition of a second language, and to identify what, if any, are relevant risk factors related to the rate of development.

Language Proficiencies in First and Second Languages. As previously stated, research suggests a cross-linguistic relationship between the two languages spoken by a bilingual child, such that greater levels of proficiencies in children's native language leads to greater levels proficiencies in children's' second, or acquired, language (Bialystok, 2001; Reese et al.,

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2000). In fact, native-language reading skills are also predictive of academic achievement in 8th grade (Reese et al., 2000). These findings are supported by Cummins' (1979) threshold hypothesis which predicts that basic competency in a native language is necessary in order to achieve academic language proficiency in a second language. Based on this theory, it is assumed that failure to acquire sufficient proficiency in one's primary language will lead to serious cognitive deficits for ELL children. In this way, a student who matches this profile would theoretically be identified, or at least referred for, special education due to apparent cognitive impairment. Research supports this assumption, as evidence of ELL placement patterns demonstrates the overrepresentation of students in special education who manifest limited skills in both native and second languages (Artiles, Rueda, Salazar & Higareda, 2005). A key factor in mitigating this outcome is literacy use in the home environment. Data suggest that children reared in homes where parents read often to their children, even in their native language, positively correlates with native and second language abilities (Bialystok, 2001; Reese et al., 2000). Therefore, it is important to consider the literacy practices of bilingual students in both their native and acquired language in order to make predictions regarding their placement in special education and future academic success.

Prior educational experience/Language of Instruction/Type of bilingual program. Children of Hispanic background are less likely to attend preschool, as only 22% of Hispanic children attend preschool compared to a 30% national average (Magnusson and Waldfogel, 2005 as cited in Conger, 2008). In fact, research suggests that preschool is a foreign concept for some Hispanic cultures (Fuller, Eggers-Pierola, Holloway, Liang, & Rambaud, 1994). According to the U.S. Department of Health and Human Services (as cited in Ballantyne, 2008), in 2005, approximately ¾ Head Start programs served children from multiple language backgrounds, though only 29% of teachers providing these services spoke a non-

English language. In addition, research indicates that ELL children in preschool programs tend to participate less than their peers (Iruka & Carver, 2006). Therefore, even when ELL students do attend preschool, the quality of their education may be compromised either by the quality of teaching or students own abilities to interact in an English-speaking classroom.

In terms of education beyond the early years, research is mixed in terms of what instructional programs are best able to prepare ELL students for academic achievement. This research is confounded by the fact that students' education in their country of origin often differs greatly from the education given to students in the United States (Gandara et al, 2003), which can lead to gaps in skill acquisition if students are not accurately placed in the correct grade or type of program. According to Bialystok (2001), there are two main types of bilingual programs. The first type is the "Bilingual Education Model" in which instruction is focused upon the development of competencies in two languages. This model is prevalent, for example, in Canada, where students are encouraged to develop skills in both English and French. The second model, which is most prevalent in the United States, is the "Transitional Bilingual Education" model in which the emphasis is placed upon the acquisition of English. This model includes "English-as-a-Second-Language (ESL)" programs and "Immersion"/"Sheltered-Immersion" programs (Bialystok, 2001). The debate regarding the efficacy of various types of bilingual programs is one of the most contentious in educational circles despite overwhelming research that supports scaffolding instruction in the ELL's native language. For example, Artiles, Rueda, Salazar and Higareda (2005) found that ELLs are more likely to be placed in special education programs if they experienced an "immersion" type of bilingual over other types of bilingual instructional programs. In other instances, it has been determined that type of program does not matter as long as students demonstrate a command of their native language that enables them to make quick

generalizations to the English language (Hakuta, 1999). More research is needed to clarify these distinctions.

Home Literacy Practices. Research demonstrates that home literacy practices significantly influence students' literacy skills (Lopez, Gallmiore, Garnier & Reese, 2007; Reese et al., 2000). In this way, greater exposure to language prior to school entrance helps prepare students for literacy practices in school. Research demonstrates that home literacy practices may vary for Spanish-speaking family from low-income backgrounds. For example, Reese et al. (2000) explained that cultural practices of Spanish-speaking immigrants allow for exposure to print and language through activities such as reading Bible stories and telling oral folk tales to children. For this reason, questions regarding the telling of family stories are included in this study as a measure of home literacy practices.

Mobility Rates. There is a very limited amount of research that explores mobility rates of ELLs. However, certain demographic indicators and research on school mobility suggest important implications for ELLs. To begin with, McCardle, Mele-McCarthy, Cutting, Leo and D'Emilio (2005) provide evidence indicating that ELL students have the largest mobility rates of any racial/ethnic group. The effects of mobility are frequently detrimental for such students, as Smith, Fien and Paine (2008) explain that higher rates of mobility depress the level and trajectory of students' reading skills throughout their school careers. In general, poverty is a major antecedent cause of high mobility rates (US General Accounting Office, 1994 as cited in Smith, Fien & Paine, 2008). For Hispanic youth, it has been suggested that mobility may also be affected by having undocumented family members as well as by the effects of discrimination (Suarez-Orozco, Rhodes & Milburn, 2009). Cosentino de Cohen, Deterding and Clewell (2005) found that schools with proportionally large numbers of ELLs

were more likely to report serious or moderate problems with tardiness and absenteeism. However, it is important to study these effects, despite the inherent difficulty in conducting such research, as it is likely that ELL students who have had to move frequently will be at greater risk for academic difficulties (and subsequent special education referral) due to inconsistencies in their education (that which may fail to be communicated to schools due to weak infrastructure) and the likelihood of greater attendance problems leading to less exposure to instruction.

CHAPTER 3

METHODS

Participants

All parents of children within second to fifth grade (students were 7-12 years old) at the participating school (Bilingual Magnet Elementary School) were included as potential participants in this study. The total population of Bilingual Magnet Elementary School is approximately 727 students, with approximately 485 students who were targeted for recruitment (from 2-5th grade). Demographic information from the district indicated that following information regarding the student population of Bilingual Magnet Elementary School: 73% of students are Hispanic/Latino, 10% are African American, 5% are Caucasian, 1% are Pacific Islander, 3% are Filipino and <1% are of Asian and American Indian/Alaskan descent. The majority of students (90%) come from low-income families within the local area of the school. The average age of students enrolled in the study was 9.26 years. However, retrospective data on each student were used, so at the time of the parent intake interview, students' ages ranged from two to twelve years of age, with an average of 6.43 years of age. The majority of students were either enrolled in preschool (28.6%) or kindergarten (31%) at the time of the BPI. All students in this study were of Hispanic/Latino descent. The majority of students were U.S. natives (85.7%), while the majority of their parents were foreign born (73.8%). The majority of immigration occurred from Mexico (76.2%), while other families originated in Guatemala (4.8%), Bolivia (2.4%), and El Salvador (2.4%). The overwhelming majority of students (97.6%) qualified for free or reduced lunch, a common indicator of low socioeconomic status. No participants were excluded because of gender or economic status. It should be noted that Bilingual Magnet Elementary School was selected for this study as a

convenience sample, as the graduate student researcher had a personal connection to several of the professionals on staff at the school.

An initial power analysis (Cohen, 1992) using 80% power at the alpha level .05 showed a sample size of 76 participants was needed to obtain adequate power for analyses. Unfortunately, once data were collected, there were serious barriers that precluded the inclusion of a large number of subjects. During preliminary work in the study, when the proposal was being created and presented to the committee and Institutional Review Board for approval, one of the psychologists within the school district had suggested that she had approximately 300 potential records that fit the inclusion criteria. Once approval was received and the researcher was able to visit the site, however, it was discovered that the psychologist had thrown out the parent interview forms from previous cases. While interviews were found for students in her current caseload, thirty-three potential subjects were eliminated from inclusion because the students had either graduated from the elementary school and were now enrolled in middle schools within the district or had transferred to other districts altogether. Similarly, eighty-eight potential subjects from a speech and language pathologist's files had to be eliminated due to non-enrollment at Bilingual Magnet elementary school, either because they graduated to middle school or moved to another district. Of the remaining potential participants, thirty students were identified who met the inclusion criteria and were enrolled in other schools within the district. In total, this included twenty-three students at ten other elementary schools and seven students at two middle schools. Consent forms were prepared and ready to be distributed to these schools, however, the district supervisor in charge of approving the study did not grant permission to allow participation of students in other schools within the

district. Ultimately, despite great efforts to identify at least 76 participants, only 42 participants were ultimately included in the current study.

Passive consent forms were made available in both English and Spanish for students and families, and the Spanish version was validated by a native Spanish speaker. Participants in the study included those students actively enrolled at Bilingual Magnet Elementary school whose parents do not withdraw their consent and whose records indicate that they had been screened for bilingual evaluation as part of an initial special education referral.

Children whose parents' HLS survey responses indicated that Spanish is spoken at home by at least one member of the students' family had their complete records reviewed the investigator. Records were found in their permanent record at their school, at an online database managed by the school and/or the district/state, or in the files of the school psychologist or language pathologist at Bilingual Magnet Elementary school.

The secretary of the school was asked to distribute consent forms to the teachers of potentially eligible students. Following a passive consent procedure, the investigator made arrangements with school personnel to conduct record reviews for those students whose parents' did not withhold consent for this study. The information that was collected during these record reviews included: responses to the Home Language Survey and the Bilingual Parent Interview (referred to as the BPI), students' English proficiency scores on the California English Language Development Test (CELDT), their Spanish language proficiency scores on the /Preschool Language Assessment Scales (Pre-LAS)/Language Assessment Scales- Links Español (LAS-Links Español), and students' academic achievement as represented by their performance on the California STAR program. In addition, the principal provided information regarding free/reduced lunch eligibility for eligible subjects.

Measures

Home Language Survey (HLS). This brief, four-question demographic questionnaire is an instrument used by school districts to identify students' primary language. The four questions used in the HLS can be found in Table 5 listing the variables in each measure that were used as a part of this study. Under Title VI of the Civil Rights Law of 1964, school districts and charter schools are required to identify limited English Proficient (LEP students) who are deemed eligible for receiving ESL services. The majority of states, including California, use a version of the HLS as the method for identification (Del Vecchio & Guerrero, 1995). Although many different versions of the HLS exist, the current study uses the version used in the state of California. To date, only one study has examined the reliability of the HLS and determined that Arizona's one-question HLS form dramatically failed to identify students in need of ELL services (Goldenberg & Rutherford- Quach, 2010).

*Bilingual Parent Interview (BPI):*The BPI is a form used by some school psychologists and speech and language pathologists in the participating school district as part of an initial special education referral when there is a question regarding language background as it relates to a child's potential achievement in school. It is an instrument created by the district and as such is an unstandardized, open-ended instrument intended to elicit background information about a child's language and acculturation environment. The BPI consists of 41 questions to be answered by a parent about their child's language, acculturation background and educational history as well as the family's basic demographic information. The BPI is available in both English and Spanish forms. Responses are provided by the parent in three interview formats: 1) at home; 2) in-person; or 3) via phone with district personnel. When surveys are completed in-person, the district may read the questions aloud to the participants if there are questions

about literacy. No comparisons were made to the larger populations and no norms are available. There are no statistical tests of reliability or validity available for this measure.

The 41 questions on the BPI focus on four main areas: 1) social and family history; 2) Parent/Family Observations about the student; 3) school history; and 4) health and developmental information. The questions in these sections focus on identifying the family's basic demographics, the languages spoken and the language preferences of the child and the child's household members, the amount of time the child has spent in the U.S. (including information re: the visits to their family's country of origin), the child's educational background and questions regarding any history of learning difficulties.

California English Language Development Test (CELDT). The CELDT is required by California law to assess the English language proficiency of all students who have a primary language other than English. The test is aligned with the English Language Development standards approved by the State Board of Education. The CELDT measures a student's proficiency of English language skills in the following domains: Listening, Speaking, Reading, and Writing. The Listening domain includes the following test components: Following Oral Directions (responding to instructions), Teacher Talk (understanding spoken information in academic settings), Extended Listening Comprehension (answering questions about a short story), and Rhyming (K–2 only) (producing words that rhyme with the words given). The Speaking domain includes the following subtests: Oral Vocabulary (knowing how to use the names of nouns, actions), Speech Functions (using language to respond to specific tasks), Choose and Give Reasons (stating a preference and giving two reasons), and 4-Picture Narrative (telling a story based on a series of pictures). The Reading domain includes the following subtests: Word Analysis (patterns and structure of words), Fluency

and Vocabulary (using a range of word meanings), and Reading Comprehension (facts, inferences, and critical analysis of fiction and non-fiction writing). The Writing domain includes the following subtests: Grammar and Structure (using Standard English grammatical structure and writing conventions), Writing Sentences (constructing sentences on specific topics) and Writing Short Compositions (writing short compositions on specific topics).

Students' scores are classified into five levels of performance on the test: Beginning, Early Intermediate, Intermediate, Early Advanced, and Advanced. Separate scores are determined for the Listening, Speaking, Reading and Writing domains. These scores are combined to provide an overall score (California Department of Education, 2010).

Language Assessment Scales Links - Español *(LAS* Español*). The LAS-Links Español* is a standardized, norm-referenced test of language proficiency. The LAS was created in 1974 in response to the Supreme Court decision in *Lau v. Nichols* (1974) in order to determine students' native language proficiency. The LAS was designed to measure proficiency of students compared to those of general education students performing at the 40th percentile rank level or better (Carpenter, 1988). In response to NCLB legislation, a revision of the LAS, the LAS-Links, was created and is used in order to cover the four essential NCLB language proficiency domains of reading, writing, listening and speaking (Albers et al., 2009). In addition, a comprehension score is provided from responses given in the listening and reading domains. The LAS-Links Español is intended for use with students in grades kindergarten through 12th.

The LAS-Links Español includes four subtests: Esuchando (Listening), Hablando (Speaking), Lectura (Reading), and Escritura (Writing). The Escuchando subtest requires

students to listen to short passages and answer questions. Students may be read test items from the administrator or listen to an optional audio CD. Students are then asked to answer questions about the passage. The hablando subtest requires students to respond verbally to questions about various items presented to the student visually (e.g. color pictures of objects, pictures depicting an activity or action). Items on the Lectura subtest assess students' abilities in the areas of phonemic awareness, fluency, vocabulary development and reading comprehension. For example, students may be asked to identify rhyming words, apply letter-sound relationships to read Spanish phonemes or apply learning strategies to interpret reading passages. The Escritura section requires students to identify appropriate grammar, capitalization and punctuation and standard sentence structure and produce sentences in paragraph form that are evaluated for content, language usage and fluency (De Avila & Duncan, 1989).

The LAS Links Assessments measure Spanish language proficiency within the following grade spans: k-1, 2-3, 4-5 and 9-12. Within each of these grade spans, students are grouped into one of five proficiency levels: 1) Beginner, 2) Early Intermediate, 3) Intermediate, 4) Advanced or 5) Fluent Spanish proficient (Duncan & DeAvila, 1989).

Studies of reliability and validity have been published in regards to the LAS, the predecessor to the LAS-Links. Regarding the LAS R/W, due to the small number of items reliability coefficients for internal consistency is generally low (about half are less than .80) (Carpenter, 1995). However, Gruyette (1995) found the internal consistency alpha scores to be adequate. Measures of concurrent validity are high, with the majority of correlations at or above .80 (Gruyette, 1995).

Preschool Language Assessment Scales Español 2000 (pre-LAS 2000 Español). The Pre-LAS 2000 Español is an extension of the Language Assessment Scales (LAS) developed by Duncan and Avila (1998) for use with younger children, aged 4 through 6 years. As such, the Pre-LAS 2000 is also a standardized, norm-referenced assessment designed to test the oral language proficiency as well as preliteracy skills in young children. The Pre-LAS 2000 is a revision of the version created in 1985 by the same authors. The test is intended for use with English-language learning students in grades pre-kindergarten through first grade to help educators make appropriate placement decisions for literacy instruction. Two versions of the pre-LAS are available in both English and Spanish, but only the Spanish version is utilized in this study.

The pre-LAS Español contains two components, an Oral Language Component for use with students ages four through six, and a Pre-Literacy Component, for use with five and six year olds. For the purposes of this study, only scores from the Oral Language Component will be used. The pre-LAS Español includes six subtests: Tío Simón (Simon Says), La Casita (The Little House), Dibujos y Frases (Phrases and Sentences), Repetición de Frases (Sentence Repeating), Terminando Cuentitos (Finishing Short Stories), and Contando Historias (Story Retelling). The Tío Simón subtest requires students to act our commands as issued by the test administrator. The La Casita subtest requires students to identify items named by the test administrator in a drawing of a house. Items on the Dibujos y Frases subtest assess students' abilities to identify the appropriate picture that matches a phrase spoken in Spanish from a set of cues. The Repetición de Frases section requires students to repeat sentences after being read aloud by the test administrator. In the Terminando Cuentitos subtest, the subject is directed to finish incomplete sentences with verbal utterances. In the Contando Historias subtest, the test administrator reads a story aloud to

the subject, who is then asked to repeat it. The administrator records the subject's response and scores the sample on a scale from 0 to 5 (Duncan & DeAvila, 1998).

The pre- LAS 2000 Assessments measure Spanish language proficiency within grades pre-kindergarten through first grade. The scores are then converted into one of five proficiency levels, linked with the same levels as the LAS: 1) Beginner, 2) Early Intermediate, 3) Intermediate, 4) Advanced or 5) Fluent Spanish proficient (Duncan & DeAvila, 1998).

In terms of cultural bias, the pre-LAS 2000 has been lauded for the fact that, contrary to other Spanish-language proficiency tests, the pre-LAS Español does not utilize direct translations of the English-language version and includes different artwork than the English-language version, therefore reducing cultural bias (Ward, 2012). In terms of technical adequacy, studies of reliability and validity have been published in regards to the English version of the pre-LAS 2000. According to the technical manual, the PreLAS 2000 has high to moderately high levels of reliability (Duncan & DeAvila, 1998). However, some have criticized the preLAS 2000 for its lack of external validity (Ward, 2012)

Standardized Testing and Reporting Program (STAR)

The Standardized Testing and Reporting (STAR) Program was authorized in 1997 and mandates that all students in grades two through eleven in California's public schools be assessed annually as part of the program to evaluate state content standards. The STAR program, as part of the California State Board of Education, determines how well students are learning in English-language arts, mathematics, history-social science and science. For the purposes of this study, only data from the English-Language arts (or Reading/Language Arts) were evaluated. The STAR program consists of four components, including (California Department of Education, 2009):

The California Standards Tests (CSTs). The CSTs show how well students are doing in relation to the state content standards. The CSTs include English-language arts (ELA) and mathematics in grades two through eleven; science in grades five, eight, and nine through eleven; and history-social science in grades eight, and ten through eleven. All questions (with the exception of Writing subtests in grades 4 and 7) are presented in multiple-choice format. Students are presented with a question and asked to respond to a choice of four possible answers. In grades 2-3, students mark their answers in a test booklet and in grades 4-7 students record their answers on a separate form. For students in grades 4 and 7, students are also asked to respond to writing prompts that are graded by trained readers. These readers grade the students' writing responses on a four-point holistic rubric, with four representing the highest score. These scores are then doubled and added to the multiple-choice scores to in order to obtain an overall score and performance level for the CST ELA section. The California State Board of Education designated five different performance levels based on CST results: advanced, proficient, basic, below basic and far below basic. These performance levels are based on CST scale scores that range from 50 to 650, with 350 representing a proficiency performance level. The specific range of scores within each level may change from year to year. A list of the scale scores and corresponding performance levels per each grade level from 2009 are listed below in Table 1 as an example of how the scoring occurs (California Department of Education, 2009).

Table 1.

CST Scale Scores and Corresponding Performance Levels: English Language-Arts (ELA).

Grade	Far Below Basic	Below Basic	Basic	Proficient	Advanced
2	150-261	262-299	300-349	350-401	402-600
3	150-258	259-299	300-349	350-401	402-600
4	150-268	269-299	300-349	350-392	393-600
5	150-270	271-299	300-349	350-394	395-600

The California Modified Assessment (CMA). The CMA is an alternate assessment that is based on modified achievement standards. The CMA is designed to assess those students whose disabilities preclude them from achieving grade-level proficiency on an assessment of the California content standards with or without accommodations. Student scores are reported as performance levels. CMA includes ELA and mathematics for students with IEPs in grades three through eight and science in grade five. Individual students' IEP teams decide if the students meet the following criteria and are eligible for taking the CMA in specific subjects and what, if any, accommodations are needed:

- Previous Participation: The student previously took the CST and scored below basic/far below basic in a subject and may have taken the test with modifications OR the student took the CAPA and scored in levels III-V for two previous years.

- Objective Multiple Measures: Records of multiple measurements over time of academic progress/lack of progress demonstrate that the student did not perform at grade-level as measured by the proficiency on CST even with accommodations

- Response to Instruction: Academic progress in response to grade-level instruction, including Special Education and related services, demonstrate that the student is not likely to achieve grade-level proficiency even with instructional intervention.

A list of the scale scores and corresponding performance levels per each grade level from 2009 are listed below in Table 2 (California Department of Education, 2009).

Table 2.

CMA Scale Scores and Corresponding Performance Levels: English-Language Arts (ELA)

Grade	Far Below Basic	Below Basic	Basic	Proficient	Advanced
3	150-234	235-299	300-349	350-396	397-600
4	150-249	250-299	300-349	350-406	407-600
5	150-219	220-299	300-349	350-401	402-600

The California Alternate Performance Assessment (CAPA). The CAPA includes ELA, mathematics, and science in grades two through eleven, and for science for grades five, eight, and ten. Like the CST and the CMA, the CAPA assesses students according to California content standards for English and math. However, the CAPA is administered individually to students. Students are asked to perform a task and a school staff member observes the students and records the students' responses according to a specific scoring rubric. The CAPA is given to those students with significant cognitive disabilities whose disabilities prevent them from taking either the CSTs with accommodations or modifications or the CMA with accommodations. The students' IEP determines if the student is eligible to take the CAPA and, if so, designates the CAPA level appropriate for the individual student. In the majority of cases, the student's grade level is the same as the CAPA level. Student scores are reported as summary scores that range from 15 to 60, with the minimum threshold for proficiency set at 35. Performance levels are the same as those for the CST and CMA (advanced, proficient, basic, below basic and far below basic).

The CAPA levels are as follows: Level I (Grades 2-11--for the most significantly

cognitively impaired students; Level II (Grades 2-3); Level III (Grades 4-5); Level IV

(Grades 6-8); and Level V (Grades 9-11). Specific ranges for each performance level may

change each year. CAPA scale scores and performance levels from 2009 are described in

Table 3 (California Department of Education, 2009).

Table 3.

CAPA Scale Scores and Corresponding Performance Levels: English-Language Arts.

CAPA Level	Far Below Basic	Below Basic	Basic	Proficient	Advanced
I	15-17	18-29	30-34	35-39	40-60
II	15-18	19-29	30-34	35-39	40-60
III	15-22	23-29	30-34	35-39	40-60

Standards-based Tests in Spanish (STS). Under State Code 606040 of the California State

Education Code, all Spanish-speaking English learners are required to take the "designated

primary language test" (DPLT) for the STAR program in Spanish for their grade. The

STAR program does not have a designated primary language test for languages other than

Spanish. The Standards-Based Tests in Spanish are given to Spanish-speaking English

learners who are eligible to take the CMA and the CSTs in grades two through eleven. The

STS assesses students' academic knowledge according to content standards for English-

Language Arts (referred to as Reading/Language Arts in the STS) and mathematics. The STS

follows the same administration, question format, scoring and assessment procedures as the

CTS and the CMA.   Criteria for eligibility to take the STS are as follows: the student

received instruction in Spanish (despite the amount of time they have been enrolled in

school in the U.S.) or they have cumulatively enrolled in a school in the U.S. for less than 12

months. Additionally, the school district may use discretion in determining a student eligible

to take the STS if they do not meet the above-stated criteria.

Scale scores and performance levels for the STS follow the same protocol as the CTS and the CMA, with scaled scores ranging from 150 to 600 and student performance labeled into one of five categories as outlined in the CST and CMA section. However, only scale scores and their corresponding performance levels are reported in grades two through four and are described below in Table 4 (California Department of Education, 2009).

Table 4.

STS Scale Scores and Corresponding Performance Levels: Reading/Language Arts.

Grade	Far Below Basic	Below Basic	Basic	Proficient	Advanced
2	150-241	242-299	300-349	350-385	386-600
3	150-250	251-299	300-349	350-392	393-600
4	150-255	256-299	300-349	350-386	387-600

Information for scale scores for 2007-2008 was not available and the test publisher was contacted directly to obtain this information. It was reported that data from both 2007 and 2008 were combined for the standard setting and the same tests were given in both years.   It was also explained that the publisher did not obtain enough data in 2007 to be able to report consequence data for the standard setting panels, and therefore scale scores were not reported (E. Zilbert, personal communication, March 23, 2012). Through this correspondence, the following information (see Table 5 below) was reported to indicate raw scores and corresponding performance levels for 2007-2008:

Table 5.

STS Raw Scores and Corresponding Performance Levels: Reading/Language Arts (2007-2008)

Grade	Below Basic	Basic	Proficient	Advanced
2	19	35	48	55
3	19	31	44	53
4	23	36	51	60

Student Records

Student records were reviewed in order to obtain demographic characteristics examined in previous studies, including the students' age, grade, gender, qualification for free or reduced lunch, special education placement status and ESL programming status.

Independent Variables

ESL Service Recipient. A score "ESL Service Recipient" was computed from the Home Language Survey. In order to determine this score, participants received a score of one if any of the responses on the HLS indicate Spanish language. Participants received a score of zero if none of the responses on the HLS indicate Spanish language. Participants who scored one or more were classified "ESL Service Recipient" and participants who scored zero were classified as "Non-ESL Service Recipient." A description of this scoring procedure, as well as scoring procedures for the other variables used in this study, can be found in Appendix G.

Socioeconomic Status. Using indications of eligibility for free or reduced lunch from student records, a financial resources score was created. Participants received a score of zero if their records indicate that they qualify for free or reduced lunch. Information from the BPI regarding parental educational levels and occupational status was used to construct a family resources score that has been used in previous research (Lopez, Gallimore, Garnier & Reese, 2007). This score was determined by averaging parental education and occupation and then coded as a dummy variable. Parents' education was evaluated by the highest grade completed by each parent as indicated on the BPI. The highest level indicated by either parent on measures of education and occupation was used in order to account for differences between students who do not live in a two-parent household. Parents identified their occupation on the BPI and their occupation was coded as follows: 1=unskilled labor, housewife; 2=skilled labor; 3=white-collar, technical work; and 4=managerial, professional. A composite score was created that combined the sum of the financial resource score and family resource scores. The score ranged from 1 to 5. A factor analysis was conducted on all the socioeconomic status factors in order to determine the number of factors that load for strength.

Prior Educational Experience. A composite score of Prior Educational Experiences was also created by combining the following sum scores: Special Education Placement, ESL Services, Prior educational experience in the home country, and Preschool Attendance. The score ranged from 0 to 4. A factor analysis was conducted on all the socioeconomic status factors in order to determine the number of factors that load for strength.

Time Spent in the U.S. Another variable that was examined is time spent in the U.S. In order to determine this score, a the number of years spent in the U.S. by the student was computed.

Transience. A composite score was computed to determine levels of transience. This score was a composite of the sum scores of School Attendance Problems, Frequent Moves, Immigration Gaps and Family Intactness. These four factors are dichotomous and responses were coded as dummy variables. Participants received a score for Attendance of one if they answered "yes" and a score of zero if they answered "no" to "are there any attendance problems." In response to the question "has your family had to move frequently," participants received a score of one if they answered "yes" and a score of one if they answered "no" to determine a frequent moves scores. Immigration Gap scores was determined by responses to the question "have you made trips to your country of origin?" Responses of "yes" were scored as one and responses of "no" were scored as zero. Family intactness scores was determined by responses to the question "has your child continuously lived with his/her biological family?" Responses of "yes" were scored as one and responses of "no" were scored as zero. All four of these items were summed together, and the resulting composite score for 'transience' ranged from zero to four. A factor analysis was conducted on all time factors in order to determine the number of factors that load for strength of transience.

Home Literacy Practices. A home literacy score was determined by scores to respondents answers to the question "do you and your family read?" and "Is your child told stories/family history?/etc." Affirmative responses to each question were scored as one or "no" were scored as zero and the two item responses were summed to create a composite score. Composite scores ranged from 0 to 2.

Parental Language Profile. A composite score of Parental Language Profile was computed as a summed score of Parents' Declared English Competence, Parents' Oral Language Preferences at home, and Parents' Oral Language Preferences at School. A sum

score of Parents' Oral Language Preferences at Home was determined by scoring responses to Languages spoken to student by the Father, Mother, Siblings and Others. Sum scores ranged from 1 to 3. Parents' Declared English Competence were scored by using the highest score to the responses to Father and Mother's Proficiency in English. A score of one was received for "Fluent/FES," a score of two was received for "Limited/LES," and a score of three was received for "Non/NES." Parents' School Oral Language Preferences was determined by analyzing what box is checked on the BPI to indicate which language the interview was conducted in. A score of one was given for responses that indicate "Spanish" and a score of zero was given for responses that indicate "English." The composite score for Parents Language Profile ranged from two to seven.

Students' Home Language Preferences. A sum score of Students' Home Language Preferences was determined by responses to the question "Language(s) student responds with to Father/Mother/Siblings/Other." If all responses indicate "English", a score of one was given. If responses include both "English" and "Spanish" responses, a score of two was given. A score of three was received if all answers indicate "Spanish." Sum scores ranged from 1 to 3.

Dependent Variables

Spanish Language Proficiency. Students' Spanish Language Proficiency was determined by proficiency levels on the pre-LAS Español or the LAS Español on the date closest to the administration of the BPI. Scores were determined by the students' proficiency levels as indicated by standard scores on the pre-LAS or LAS Español in accordance with the test publishers, as the standard scores on the two measures are linked. The five proficiency levels received the following scores: "Beginner" received one point, "Early Intermediate"

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received two points, "Intermediate" received three points, "Advanced" received four points, and "Fluent Spanish" received five points.

English Language Proficiency. Students' English Language Proficiency was determined by proficiency levels as established through scores on the CELDT on the date closest to the administration of the BPI. Performance levels were used to indicate scores as follows: : "Beginning" received a score of one, "Early Intermediate" received a score of two, "Intermediate" received a score of three, "Advanced" received a score of four, and "Advanced" received a score of five.

Bilingual Profile. A composite score of bilingualism was determined by analyzing the scores of English Language Proficiency and Spanish Language Proficiency according to the scoring matrix presented in Table 6 below. This composite represents the relative strength of the students' overall bilingual abilities as well as relative dominance and weaknesses in native and second-language development. These scores ranged from 1 to 9.

This scoring rubric is adapted from Rhodes, Ochoa and Ortiz's (2005)'s work describing the language profiles of second-language learners. In their guide, *Assessing Culturally and Linguistically Diverse Students*, the authors outline nine different profiles that depict a spectrum describing the most common variances amongst language development in native language and second languages, ranging from Profile 1, which describes students minimally proficient in both languages, to Profile 9, which depicts students fully proficient in both languages. The heuristic has been adapted to the current study to account for differences in measures, as Ortiz and colleagues (2005) utilized cognitive academic language proficiency (as determined by the Woodcock Muñoz Language Survey) scores to determine the proficiency levels in both native and second languages. Due to the limitations of the current study, proficiency levels were determined by students' scores on the CELDT and the

pre-LAS/LAS. While these scores are not perfect measures of cognitive academic language proficiency, they do represent students' language skills in areas of academic English and Spanish and are hence appropriate for this purpose. Scores in the 1-2 range are considered "minimal," scores of 3 are considered "emergent" and scores in the 4-5 range are considered "fluent" according to the rubric presented below (Rhodes et al., 2005).

Table 6.

Bilingual Profiles (adapted from Rhodes, Ochoa & Ortiz, 2005)

	L2 Proficiency: Minimal	L2 Proficiency: Emergent	L2 Proficiency: Fluent
L1 Proficiency: Minimal	**Profile 1**: individual has no significant dominant language, and proficiency and skills in both languages are extremely limited	**Profile 4**: individual is relatively more dominant in English, with developing but limited proficient and skills; native language proficiency and skills are extremely limited	**Profile 7**: individual is highly dominant and very proficient in English; native language proficiency and skills are extremely limited
L1 Proficiency: Emergent	**Profile 2**: individual is relatively more dominant in native language, and proficiency and skills are developing but limited; English proficiency and skills remain extremely limited	**Profile 5**: individual has no significant language dominance and is developing proficient and skills in both but is still limited in both	**Profile 8**: individual is dominant and very proficient in English; native language proficiency and skills are developing but limited
L1 Proficiency: Fluent	**Profile 3**: individual is highly dominant and very proficiency in native language; English proficient and skills remain extremely limited	**Profile 6**: individual is relatively more dominant in native language, with high proficient and skills; English proficiency and skills are developing but still limited	**Profile 9**: individual has no significant dominant language and is very fluent and proficient in both

Academic Achievement in English. English-language academic achievement scores were based upon students' English-Language Arts achievement scores on the STAR program on the date closest to the administration of the BPI. Because ELL students may take any combination of the three formats in English depending on the determination of individual educational plans (CST, CMA, CAPA), a composite score was created to account for this variability in cut-off scores used to determine performance levels in each of the four formats as well as variability in formats administered. Scale scores on the STAR program were used to make five performance levels. "Far Below Basic" received a score of one; "Below Basic" received a score of two; "Basic" received a score of three; "Proficient" received a score of four; and "Advanced" received a score of five. Composite scores for academic achievement ranged from 1 to 5.

Academic Achievement in Spanish. Spanish-language academic achievement scores were based upon students' Reading-Language Arts achievement scores on the STS format of the STAR program on the date closest to the administration of the BPI. Scale scores on the STS were used to make five performance levels and are commensurate with the CST and the CMA. "Far Below Basic" received a score of one; "Below Basic" received a score of two; "Basic" received a score of three; "Proficient" received a score of four; and "Advanced" received a score of five. Composite scores for academic achievement ranged from 1 to 5.

CHAPTER 4

RESULTS

Primary Analyses

Before conducting any analyses, the data were examined for missing data and it was determined that no independent variables were missing more than two data points. For this reason, missing cases were dropped for each variable that included missing data.

While the study originally proposed a multiple regression design, these analyses were abandoned due to inadequate sample size. The original proposed multiple regressions can be found in Appendix A, but are not included in the main results. In order to determine the number of participants needed for the analyses, a power analysis (Cohen, 1992) was originally conducted using 80% power at the alpha level .05. A medium effect size was expected for the effect of background characteristics on language proficiency and academic achievement outcomes. Using the sample size tables in Cohen (1992), it was estimated that approximately 76 participants were needed to obtain adequate power for analyses. However, as previously noted, there were serious and significant limitations to obtaining these many subjects and in the end, only 42 subjects participated in the study. Each study question was re-formulated to measure correlations between variables, rather than prediction through regressions. In addition, independent sample t-tests and one-way ANOVAs were conducted to verify these results. Before conducting any of the main research questions, the composite factors were first analyzed using Pearson correlations and Cronbach's alpha to estimate if the factors were reliable for use. The next section will describe these results in detail.

Factor Analysis

The SES composite was first analyzed using Pearson correlations to measure the relationship between the three proposed items included in the composite (e.g., Parental Education Level, Parental Occupation and Free or Reduced Lunch). While Parental Education Level ($r=.980$, $p<.001$) and Parental Occupation ($r=.652$, $p<.001$) were significantly correlated with all three items, Free or Reduced Lunch failed to meet statistical significance ($r=.151$, $p=.339$). For this reason, Free or Reduced Lunch was dropped and a Cronbach's alpha was computed to estimate the reliability of the factor with the remaining items. The SES factor was then found to be unreliable and the composite was abandoned (two items, $\alpha=.394$).

Next, the Prior Educational Experience factor was examined using the same statistical procedures. Originally, ESL recipient was proposed as an item to be included in this factor, yet it was abandoned due to inadequate variability (only one child had not received ESL services). Subsequently, "IEP Ever," "Previous Educational History in Home Country," and "Preschool Experience" were examined using Pearson correlations. Results demonstrated that previous educational experience in the child's home country weakly correlated with all items in the Prior Educational Experience composite ($r(40)=.38$, $p<.05$). In addition, preschool experience also correlated with all items in the composite ($r(40)=.38$, $p<.05$). However, having had an individual education plan (IEP) did not correlate with the composite and was thus abandoned ($r(40)=.25$, $p=.110$). A Cronbach's alpha was then computed on the remaining two items and it was found that the composite was highly unreliable (two items, $\alpha=-.138$), thus, the composite was not used in subsequent analyses.

The composite factor of Transience was then analyzed to estimate the correlation between each item included, and it was found that each item reached statistical significance:

school attendance problems (r(37)=.627, p<.01), frequent moves (r(37)=.599, p<.01), immigration gaps (r(37)=.407, p<.05), and family intactness r(37)=.599, p<.01). However, the four factors were analyzed with Cronbach's alpha and the composite was found to be highly unreliable (four items; α = .254), and was thus dropped from analysis.

The composite, "Home Literacy Practices" was analyzed next, and it was found that family reading (r(37)=.621, p<.01) and family story telling (r(37)=.701, p<.01) were both significantly correlated with the other items in the composite. Using Cronbach's alpha, it was estimated that the composite for Home Literacy Practices was reliable (two items, α= -0.84). However, like the earlier composites, this one was also eventually abandoned because there were only two items in the composite, which rendered it unreliable in practical terms.

The Parental Language Profile composite was then analyzed. Parents Declared English Competence was strongly correlated with the items included in Parental Language Profile (r(40)=.711, p<.01). In addition, Parents Oral Home Language Preference was strongly correlated with the Parental Language Profile (r(40)=.731, p<.01). However, Parents Home Language Preference at School did not meet statistical significance for correlation with the items on the Parental Language Profile (r(40)=.002, p=.991). This variable was removed from the composite and a Cronbach's alpha was run for the remaining two items, The Parental Language Profile composite was found to be unreliable (two items; α=.398) and was subsequently abandoned from subsequent analysis.

In summary, all factors originally proposed for analysis were found to be unreliable and therefore the analyses were changed to utilize independent items from the Parent Interview in the primary analyses in this investigation.

Demographics

  The present sample consists of 42 Hispanic children who attended a public

elementary school. Information about a variety of demographic variables was found in their

school records as well as in parental responses to the BPI. Information regarding variables

specific to the students, as well as a table regarding variables specific to the parents/family

(see Table 7), are presented below. In addition, it should be noted that the average number

of household members for the subjects in this study was 5.62 members (standard

deviation=2.11) and the average highest grade completed by a parent was 11.38 years

(standard deviation=2.15).

Table 7.
Demographic Variables.

Family Intactness	83.3%
Free or Reduced Lunch	96.7%
Parental Occupation: Unskilled labor or housewife	78.6%
Parental Occupation: Skilled Labor	16.7%
Parental Occupation: White collar/technical work	4.8%
Frequent Family Moves	17.5%
Family reads together	84.6%
Student is told stories/family history	81.0%
Education Variables	
ESL Recipient	97.6%
Currently SPED	54.8%
Previously SPED	90.5%
Diagnosis of SLD	50.0%
Diagnosis of SLI	64.3%
School attendance problems	50.0%
Student Attended Preschool	73.8%
Student attended school in country of origin	14.3%
Student History of Learning Difficulties	35.7%
Family History of Learning Difficulties	50.0%
Language Variables	
Student responds with English only to father/mother/siblings/other	4.8%
Student responds with English and Spanish to father/mother/siblings/other	57.1%
Student responds with Spanish only to father/mother/siblings/other	38.1%
Family/Others speak to student only in English	4.8%

Table 7, continued.

Family/others speak to student in both English and Spanish	52.4%
Family/others speak to student in only Spanish	42.9%
Parent Interview conducted in Spanish	82.9%
Parent Fluent English Speaker	45.2%
Parent Limited English Speaker	50.0%
Parent Non-English Speaker	4.8%
Immigration Variables	
Student is US Native	87.8%
Parent is US Native	22.5%
Immigration Gaps	21.4%
Parents born in Mexico	78.0%

Furthermore, the following information regarding students' language backgrounds was obtained from parental responses to the HLS, also found in their student records (see Table 8 below):

Table 8.

Home Language Variables.

Home Language Variables	%
Students' first language learned when beginning to speak was Spanish	97.6
Student most frequently uses Spanish at home	90.5
Parents most frequently use Spanish to speak to their children	95.2
Spanish is the language used most often by adults in the home	92.9

In addition, information regarding students' language proficiency levels and academic achievement measures in English and Spanish was collected from their student records and are presented in Table 9 and 10 below:

Table 9.

Summary of Performance Levels in English Language and Spanish Language Proficiency.

	Percent (%)	
Performance Level	English Language Proficiency	Spanish Language Proficiency
Beginner Spanish	69.0	26.2
Early Intermediate	19.0	14.3
Intermediate	9.5	21.4
Advanced	2.4	19.0
Fluent	0.0	16.7

Table 10.

Summary of Academic Achievement Performance Levels in English and Spanish.

	Percent (%)	
Performance Level	Academic Achievement English	Academic Achievement Spanish
Far Below Basic	19.0	4.8
Below Basic	42.9	33.3
Basic	21.4	16.7
Proficient	4.8	11.9
Advanced	0.0	2.4

In addition, students' language proficiencies in both English and Spanish were organized into categories according to their varying levels of bilingualism, as originally developed by Rhodes, Ochoa and Ortiz (2005). A summary of these findings is presented in Table 11 below.

Table 11.

Summary of Students' Levels of Bilingualism.

Profile	Description	Percent (%)
Profile 1	Proficiency levels in native language (L1) and English (L2) are both in the 1-2 range—individual has no significant dominant language, and proficient and skills in both languages are extremely limited	0.0
Profile 2	Proficiency in native language is in the 3 range and English is in the 1-2 range—individual is relatively more dominant in native language, and proficiency and skills are developing but limited; English proficiency and skills remain extremely limited	38.1
Profile 3	Proficiency in native language is in the 4-5 range and English is in the 1-2 range—individual is highly dominant and very proficiency in native language; English proficient and skills remain extremely limited	19.0
Profile 4	Proficiency in native language is in the 1-2 range and English is in the 3 range—individual is relatively more dominant in English, with developing but limited proficient and skills; native language proficiency and skills are extremely limited	35.7
Profile 5	Proficiency in native language is in the 3 range and English is in the 3 range—individual has no significant language dominance and is developing proficient and skills in both but is still limited in both	2.4
Profile 6	Proficiency in native language is in the 4-5 range and English is in the 3 range—individual is relatively more dominant in native language, with high proficient and skills; English proficiency and skills are developing but still limited	2.4
Profile 7	Proficiency in native language is in the 1-2 range and English is in the 4-5 range—individual is highly dominant and very proficient in English; native language proficiency and skills are extremely limited	0.0
Profile 8	Proficiency in native language is in the 3 range and English is in the 4-5 range—individual is dominant and very proficient in English; native language proficiency and skills are developing but limited	0.0
Profile 9	Proficiency in native language and English are both in 4-5 range—individual has no significant dominant language and is very fluent and proficient in both	0.0

The primary data analytic approach involved the computation of Pearson correlations for all variables that were interval or dichotomous. For those variables that were more ordinal in nature, the Pearson correlation, where significant, was followed up by a one-way ANOVA or independent samples t-test. A summary of these results is presented in the text below and a more detailed description of these statistical analyses can be found in Appendix B.

Are any of the demographic variables obtained from the BPI associated with students' language proficiency scores in both English and Spanish (as measured by the CELDT and the LAS-Links Español/Pre-LAS 2000)?

To answer this question, Pearson correlations were used to estimate if the items from the BPI correlated significantly with English Language Proficiency, Spanish Language Proficiency, or the Bilingual Profile. A summary of the results is presented in Table 12 below.

Table 12.

Pearson Correlation Matrix among BPI Items and Language Outcomes.

		1	2	3
		Spanish Language Proficiency	English Language Proficiency	Bilingual Profile
1	Free or Reduced Lunch	-.20	0.32*	-.02
2	Currently SPED	-.50**	0.41**	-0.29
3	Previous IEP	-0.32*	-0.13	-0.45**
4	Parental Education Level	-0.04	0.01	-0.12
5	Parental Occupation	-0.17	0.18	-0.13

Table 12, Continued.

		1	2	3
		Spanish Language Proficiency	English Language Proficiency	Bilingual Profile
6	Student Years in US	-0.36*	0.69**	-0.06
7	Student Immigration Status	0.19	-0.03	0.17
8	Parents Immigration Status	0.28	-0.29	0.18
9	School Attendance Problems	0.02	0.23	0.15
10	Frequent Moves	-0.05	0.06	-0.02
11	Immigration Gaps	-0.03	-0.01	-0.05
12	Family Intactness	0.18	-0.01	0.21
13	Previous Educational History in Home Country	0.28	-0.24	0.23
14	Preschool Experience	0.02	0.28	0.11
15	Family History of Learning Difficulties	-0.07	-0.09	-0.14
16	Student History of Learning Difficulties	-0.03	0.08	0.08
17	Parents Declared English Competence	0.01	-0.21	-0.01
18	Parents Oral Home Language Preferences	0.30	-0.45**	0.15
19	Parents Oral Language Preference at School	0.10	0.02	0.12
20	Student Language Preferences at Home	0.27	-0.52**	0.03
21	Family Reading	0.02	-0.32**	-0.19
22	Family Story Telling	-0.18	0.21	-0.01
23	Students age at time of BPI	-0.21	0.65**	0.08

Table 12, Continued.

		1	2	3
		Spanish Language Proficiency	English Language Proficiency	Bilingual Profile
24	Number of Household Members	0.01	0.09	-0.02
25	Gender	-0.18	-0.01	-0.19
26	Spanish Language Proficiency		-0.07	0.81
27	English Language Proficiency	-0.07		0.31
28	Bilingual Profile	0.81**	0.31*	

** $p < 0.05$.

** $p < .0.01$.

Spanish Language Proficiency. In regard to Spanish Language Proficiency, students with higher levels of proficiency:

- Were less likely to be in special education

- Were less likely to have a previous special education placement

- Spent fewer years in the U.S.

English Language Proficiency. In regard to English Language Proficiency, students with higher levels of proficiency:

- Were more likely to be in special education

Given the surprising nature of this result, other variables related to special education placement were also examined. An independent samples t-test was conducted and Levene's test for equality of variances was found to be violated, so a t statistic not assuming

homogeneity of variance was computed, F (39, 35.57) = 18.07, p <.01. It was found that students who were in special education placements had also been living in the US significantly longer (M=7.91, SD=2.99) than those students who were not in special education placements (M=3.62, SD=1.29; t(35.57)= -6.07, p< .01). This better accounts for the relationship between special education placement and English language proficiency.

- Spent more years in the U.S.

- Were less likely to have parents who prefer to speak Spanish at home

- Were less likely to prefer to use Spanish at home

- Were less likely to have parents report that they read at home

- Were older

Bilingual Profile. In regard to the Bilingual Profile, students with higher levels of proficiency in both their native and second languages:

- Were less likely to have a previous special education placement

Are any of the demographic variables obtained from the BPI associated with students' academic achievement (as measured by the state-wide achievement tests from the STAR program)?

To answer this question, Pearson correlations were used to estimate if items from the BPI significantly correlated with academic achievement in English and Spanish. A summary of the results is presented in Table 13 below.

Table 13.

Pearson Correlation Matrix among BPI items and Academic Outcomes.

		26	27
		Academic Achievement in Spanish	Academic Achievement in English
1	Free or Reduced Lunch	.[b]	0.18
2	Currently SPED	-0.51**	0.02
3	Previous IEP	0.12	0.17
4	Parental Education Level	-0.17	-0.30
5	Parental Occupation	0.02	-0.01
6	Student Years in US	-0.41*	0.22
7	Student Immigration Status	0.02	0.05
8	Parents Immigration Status	0.17	0.08
9	School Attendance Problems	-0.03	0.12
10	Frequent Moves	-0.18	0.01
11	Immigration Gaps	-0.03	-0.09
12	Family Intactness	-0.34	-0.16
13	Previous Educational History in Home Country	-0.01	-0.25
14	Preschool Experience	0.09	0.10
15	Family History of Learning Difficulties	-0.26	-0.31
16	Student History of Learning Difficulties	-0.36	-0.21
17	Parents Declared English Competence	-0.05	0.11
18	Parents Oral Home Language Preferences	0.31	-0.10
19	Parents Oral Language Preference at School	0.33	0.17
20	Student Language Preferences at Home	0.38*	-0.04

Table 13, Continued.

		26 Academic Achievement in Spanish	27 Academic Achievement in English
21	Family Reading	0.13	-0.17
22	Family Story Telling	-.47*	-0.09
23	Students age at time of BPI	-.38*	.108
24	Number of Household Members	0.19	0.17
25	Gender	0.24	0.04

* p <.05

** p <.01

b. cannot be computed because at least one of the variables is constant

Academic Achievement in English. No variables on the BPI correlated significantly with academic achievement in English.

Academic Achievement in Spanish. In regard to academic achievement in Spanish, students with higher levels of achievement:

- Were less likely to be in special education

- Spent fewer years in the U.S.

- Were more likely to prefer to use Spanish at home

- Were less likely to have parents report telling stories at home

- Were younger

Is language proficiency in L1 and L2 associated with academic achievement?

To answer this question, Pearson correlations were used to estimate if English language ability, Spanish Language Ability, or the Bilingual Profile correlated significantly with academic achievement in English and Spanish. A summary of the results in presented in Table 14 below.

Table 14.

Pearson Correlation Matrix Among Language Proficiencies in L1 and L2 and Academic Outcomes.

	Spanish Language Proficiency	English Language Proficiency
Academic Achievement in Spanish	0.44*	0.04
Academic Achievement in English	-0.03	0.40*

* $p < .05$.

** $p < .01$

In regard to students' language proficiencies in L1 and L2 and academic outcomes, the following significant correlations were found:

- Students with higher levels of Spanish Language Proficiency were more likely to have higher levels of academic achievement in Spanish

- Students with higher levels of English Language Proficiency were more likely to have higher levels of academic achievement in English

- Students with higher levels of academic achievement in English were more likely to have higher levels of academic achievement in Spanish

Is the HLS associated with student's language proficiencies in both English (CELDT) and Spanish (LAS-Links Español/Pre-LAS 2000)?

To answer this question, Pearson correlations were used to estimate if questions one through four on the HLS correlated significantly with English Language Ability, Spanish Language Ability, or the Bilingual Profile. A summary of the results is presented in Table 15 below.

Table 15.

Pearson Correlation Matrix Among HLS Questions and Language Proficiency Outcomes.

	Spanish Language Proficiency	English Language Proficiency	Bilingual Profile
HLS Question 1	0.20	-0.11	0.14
HLS Question 2	0.31*	-0.45**	-0.07
HLS Question 3	0.13	-0.31*	-0.08
HLS Question 4	0.23	-0.32*	0.01

* p<.01

** p<.05

In regard to the second question from the HLS ("what language does your child use most frequently at home?"), students who more frequently use Spanish at home were:

- More likely to have higher levels of Spanish Language Proficiency

- More likely to have lower levels of English Language Proficiency

In regard to the third question from the HLS ("what language do you use most frequently to speak to your child?"), students who are spoken to in Spanish by their parents were more likely to have lower levels of English language proficiency.

Finally, in regard to the fourth question from the HLS ("name the language most often spoken by the adults at home"), students from homes with Spanish as the predominant home language were more likely to have lower levels of English language proficiency.

Is the HLS associated with students' academic achievement?

In order to answer this question, Pearson correlations were used to estimate if questions one through four on the HLS correlated significantly with academic achievement in English and Spanish. Unfortunately, there were only a few respondents who had indicated English for each of those four questions, and all of those students for whom English was indicated for any one of the four items were also missing an Academic Achievement in Spanish score. Thus, a correlation could only be conducted between the HLS questions and Academic Achievement in English. A summary of the results is presented in Table 16 below.

Table 16.

Pearson Correlation Matrix among HLS Questions and Academic Outcomes.

	Academic Achievement English
HLSQ1	0.03
HLSQ2	-0.16
HLSQ3	-0.11
HLSQ4	-0.07

* p <.05

** p <.01

It was found that there is no significant relationship between any of the HLS questions and academic achievement in English.

Are demographic variables from the BPI more strongly associated with language proficiency and achievement

scores than the HLS?

In order to answer this question, Fisher's z conversions were computed in order to

estimate if the correlation coefficients for the BPI and HLS variables were significantly

different from each other on measures of language proficiency. Correlation coefficients on

academic achievement scores could not be used because both the BPI and the HLS

questions failed to meet significance on achievement outcomes in English and the

correlations between the HLS and academic achievement in Spanish could not be

computed.

In order to assess if the BPI was more strongly correlated with English language

proficiency than the HLS, all correlations were first converted into Fisher's z scores.

Because multiple correlations were being compared, the sum total of all BPI correlations

with English language proficiency was averaged (r= -0.09). Next, the sum total of all HLS

questions and English language proficiency was also averaged (r=-.50). These r values were

then entered into Fisher's formula. The obtained value of z was -1.696. This value has a two-

tailed probability of .0892. Since this value was greater than .05, these two averaged

correlations did not differ from each other.   It was, therefore, determined that items from

the BPI are not better correlated with English language proficiency than items from the

HLS.

In order to assess if the BPI better correlated with Spanish language proficiency than the

HLS, the sum total of all BPI correlations with Spanish language proficiency was averaged

(r= -0.13) and the average was also computed for all HLS questions and Spanish language

proficiency (r=0.36). These r values were then entered into Fisher's formula with Z equaling

2.141. This translated into a two tailed probability of .0249. Thus, these two averaged

correlations differed significantly from each other and it was determined that items from the

HLS are better correlated with Spanish language proficiency than are items from the BPI.

CHAPTER 5

DISCUSSION

Research consistently indicates that ELL students fall far behind academically in comparison to their monolingual peers (August & Shanahan, 2006; Huber et al., 2006; Keiffer, 2008). While schools are federally mandated to ensure the progress of ELL students, the utility of screening and classification procedures utilized by states have been called into question (Abedi, 2008; O'Malley & Pierce, 1994; Zuniga, 2004). Specifically, the validity of the Home Language Survey, the most commonly used screening tool for ESL placement in the U.S. (Del Vecchio & Guerrero, 1995) has been criticized for lack of empirical support. Research suggests that a host of demographic factors may account for the low achievement levels of ELLs and yet there are almost no studies to date that validate the efficacy of a more comprehensive screening process toward this end. Thus, this dissertation explored the relationship between the Home Language Survey relative to a more in depth Language interview that captured demographic characteristics of ELL students, on language proficiency and academic achievement in both English and Spanish.

Demographic Characteristics

Socioeconomic Status. The demographic characteristics of the families in this study were comparable to data found in the existing literature. Although comparisons to non-Hispanic subjects could not be made, characteristics of the current sample reflected the national prevalence of Hispanic families in low socioeconomic status categories (Ballantyne, 2008; Ramirez, 2004; U.S. Census Bureau, 2007; U.S. Census Bureau, 2010). Findings indicated

that an overwhelming majority of subjects qualified for free or reduced lunch, the average educational level of parents was below a high school diploma, and the majority of parents worked in unskilled labor fields. However, none of these factors were significantly associated with students' language proficiency or academic achievement in either English or Spanish. Previous research has shown that ELL students from lower socioeconomic backgrounds are less likely to attain higher levels of academic success and English language proficiency (Hakuta, Butler & Witt, 2000; Halle, Hair, Wandner, McNamara & Chien, 2012; Suarez-Orozco et al., 2009). Other research has shown that Hispanic students whose parents have low educational backgrounds are at greater risk of academic failure (Halle et al., 2012; Suarez-Orozco et al., 2009). The difference between these findings and that of the present study are likely related to inadequate sample size as well as insufficient stratification within this group. The present sample consisted of forty-two students in one elementary school, of which 96.7% qualified for free or reduced lunch. Therefore, it was impossible to compare students in low and high socio-economic groups. It is possible that a larger sample size that included students in other more economically diverse schools would have generated more significant results.

Mobility. A limited amount of research suggests that ELL students have disproportionately high rates of mobility relative to other ethnic/racial groups (McCardle et al., 2005; U.S. Secretary of Education, 1991) and that high mobility rates negatively impact students' reading achievement (Smith et al., 2008). Research also suggests that high mobility rates are associated with poverty and higher rates of school absenteeism (de Cohen et al., 2005; Smith et al., 2008). With respect to mobility, this study primarily assessed parents' self-reports to the questions, "have you and your family had to move frequently?" and "have you had trips to your country of origin?" The vague language of these questions may have had an

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impact on the lack of significant findings for the association between these factors and students' language proficiency and achievement, as responses were subjectively qualified. Although the present study attempted to mitigate these issues by using Spanish-speakers to conduct the parent interviews, the lack of a comparison with a control group limits the ability to demonstrate its effect. Despite these potentially mitigating factors, it is possible that these findings reflect the true relationship between language and literacy outcomes and mobility rates. For example, students in this sample may have been particularly resilient despite multiple moves. Conversely, students may have moved locally, rather than to other cities, states, or even other countries. In this way, students would more likely have remained in their same school district, which minimizes the impact on their educational continuity in language learning.

Immigration & Years in the U.S. The immigration status (of parents and student) had no significant relationship with the overall academic achievement of students. However, the number of years a student had resided in the U.S. was related to both increases in English Language Proficiency and decreases in Spanish Language Proficiency. This is consistent with previous findings, which controlled for SES and school-level demographics, and demonstrated a significant effect for age of entry into U.S. schools on obtaining English language proficiency, such that older immigrant students required more time to become proficient in English than their younger peers (Conger, 2008). Other research suggests that 5-10 years is needed for ELL students to obtain advanced levels of proficiency (Collier, 1989; Cummins, 1981; Hakuta et al., 2000). Although this was an expected result (living in the US longer meant that students were better in English), this does validate the utility of the demographic interview to better understand students' expected language proficiency.

Educational Factors. There were no significant relationships between preschool attendance and any language or achievement outcomes. This finding contradicts evidence which suggests that preschool attendance has a positive impact on ELL student achievement (Ballantyne et al., 2008). However, again, a small sample size limited the statistical power of the current analyses. Also, limited stratification may have accounted for this finding, as almost three-fourths of all subjects attended preschool. In addition, subjects were selected on the basis of a referral for special education, as psychologists and speech pathologists conducted the parent interview as part of their evaluation for ELL students when background knowledge regarding language development was needed to determine disability status. So, it may be that early educational experiences did provide additional benefits to this group, but they could not be identified due to the small number of students who did not attend preschool.

In the current sample, half of the students were in special education placements, while over 90% were previously enrolled in special education classes. In practical terms, all Early Intervention students need to be re-evaluated for special education eligibility upon transfer to public elementary school. Therefore, the present sample may not be representative of the Hispanic population at large, as parents of students not referred for special education evaluations were not given the parent interview. This explanation may help explain the divergence from other research, which suggests that only 22% of all Hispanic children attend preschool (Conger, 2008). Future research should include ELL students who were not referred for special education evaluations and examine the relationship between preschool attendance and language and achievement measures.

Previous research has also found that ELLs with limited proficiency in their native and second language had the highest rates of identification for special education of all ethnic/racial groups and are more likely placed in two high incidence categories, namely, Specific Learning Disability and Speech or Language Impaired (Gandara et al., 2003; Artiles et al., 2005). Although the limited sample size precluded the use of regression analyses, the demographics of the sample show that more than half of all students had been diagnosed with a Specific Learning Disability or a Speech or Language Impairment. The lack of comparison groups with other racial/ethnic individuals made it impossible to examine disproportionality and future studies should address these issues. For example, researchers could focus on the cognitive profiles of ELL students classified as Specific Learning Disability and Speech-Language Impaired as well as those students in these categories who have been exited from special education placements in order to help distinguish between those students who truly have an endogenous disability and those whose language acquisition development makes their profiles seem similar to students who have reading or speech disabilities. In this way, researchers may be able to help reduce the disproportionate number of ELL students identified with Specific Learning Disability and/or Speech-Language Impaired as well as highlight critical factors that enable at-risk ELL students overcome significant gaps between their intellectual ability and academic achievement.

When looking at special education placement more broadly, group differences were found in terms of the relationships between special education placements and language proficiency and academic achievement outcomes. Students currently or previously qualified for special education had lower levels of Spanish language proficiency. This finding supports Artiles et al.'s (2005) previous research, which found that low levels of proficiency in native language corresponded with higher special education identification rates. This finding was

expected, as one would anticipate that students with learning disabilities would fall further behind their non-disabled peers. In contrast, within this study, students currently in special education placements had higher levels of English language proficiency than students in regular education placements. However, this result appears to represent not an effect of being in special education placements, but instead of having been in the U.S. significantly longer than those students who were not in special education. Students in special education were twice as old as their non-disabled peers, and had likely gained their English Language Proficiency skills through exposure over time.

Parent and Student Language Preferences. Home Literacy practices were also examined as they related to student language proficiency and academic outcomes. An examination of the relationships between parent reports of reading and telling stories to their children yielded surprising results. Greater exposure to literacy in the home was associated with improved literacy skills in previous research (Lopez et al., 2007; Reese et al., 2000); however, in this study there was no significant relationship between family reports of reading and proficiency in either language. In fact, students whose parents reported to read them stories at home had lower levels of academic achievement in Spanish. There are several explanations for this result. The language of the books that families reported reading was not collected. Therefore, it may be that families, who were reading to their children at home, were actually doing so in English. This may serve to prepare students in English, more than practicing Spanish with their parents (as those who reported not reading to their child may have been doing). The result may also be a factor of the self-report nature of the questions. The study asked parents "do you and your family read?" and "is your child told stories?" In general, self-report measures have limited reliability and the language for these questions developed by psychologists and speech pathologists in the district may have been too vague to garner

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accurate responses or solicited some bias in reporting. Specifically, the first question could be interpreted to mean that parent themselves read and could have lacked implications for literacy exposure to their children. Parental language preferences and English language competencies were also explored in terms of their impact on student outcomes.

Results from the parent interview suggest that the sample was split approximately in half between fluent and limited English speakers, which is consistent with recent census bureau statistics (U.S. Census Bureau, 2010). However, parents' levels of English competence did not significantly correlate with study outcomes. This finding may indicate that parents' English language competence does not influence student outcomes as long as the student receives adequate instruction in English. In this way, a child of a limited or non-English speaker may be able to obtain achievement levels commensurate with ELL students with fluent, English-speaking bilingual parents. This explanation is supported by research which indicates that English use at school is a stronger predictor of English reading achievement than English use at home (Genesse et al., 2005). Future research should explore the impact of various types of bilingual instruction as they relate to predictions of language proficiencies and academic achievement in native and second languages.

Parent responses also suggested that approximately half of the sample used a mixture of Spanish and English at home, while the majority of the remaining half used Spanish only. More Spanish use at home by parents correlated with lower levels of English language proficiency for students. Students who spoke only Spanish at home had the lowest levels of ELP, followed by those who spoke both languages, and finally those who only spoke English. This suggests that the frequency of Spanish use at home, rather than parents' actual competencies in English, has greater influence on students' abilities to obtain higher levels of

English proficiency and achievement scores. Additionally, these findings suggest that ELL students from bilingual, rather than monolingual Spanish backgrounds may have an initial advantage in elementary school. Future research should include longitudinal studies of similar populations to replicate these findings and determine if these effects are maintained into middle and high school. One may recall Cummins' (1979, 1984) seminal research which posited that ELL students may be able to attain basic interpersonal communication skills, or BICS, relatively quickly, but that it takes years before students are able to demonstrate cognitive academic language proficiency, or CALP, which allows them to engage successfully in academic tasks. Indeed, research indicates that it takes four to seven years for ELL students to achieve at grade-level (Collier, 1987; Cummins, 1981; Hakuta et al., 2000). Therefore, it is important to conduct studies that examine these effects over time in order to determine if the advantage conferred on students from bilingual households is maintained after student have had sufficient time to develop cognitive academic language proficiency.

The Relationship between Language Proficiency in L1, L2 and Academic Achievement.

As expected, this study supported the existing research, which links L1 and L2 proficiencies, independently, to academic outcomes (Reese et al., 2000; Genesse et al., 2005). Students with higher levels of Spanish Language Proficiency attained higher levels of academic achievement in Spanish, and students with higher levels of English Language Proficiency attained higher levels of academic achievement in English. Additionally, those who performed better on achievement tests in English also performed better on these same tests in Spanish.

This study sought to extend Cummins' (1979) research, which speculated that relative levels of proficiency in both native and second languages would reveal distinctly

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different patterns of language development for the bilingual child. Based on this theory, students with strong language skills in at least one language should be able to adequately develop skills in both languages. A very limited research base suggests that early proficiency in both native and second languages predicts later levels of reading skills in both languages (Reese et al., 2000). Findings from this study did not support this theory, as bilingual profiles had no significant relationship with measures of academic achievement, either in English or Spanish. However, these results may have been seriously limited by the small sample size, as there were not enough students in each category to obtain statistical significance.

It is interesting to note, however, that even with the general limited English Language Proficiency of these students, there was variability in their relative levels of bilingualism. Roughly 38% of students were minimally dominant in Spanish, with very limited English skills and basic Spanish skills. In contrast, almost equal numbers exhibited the opposite pattern, namely minimally dominant in English with very limited Spanish and basic English skills. The majority of remaining students had advanced Spanish skills and very limited English skills. And yet, despite this variation, the overwhelming majority (88%) of the students in this sample lacked basic English language skills, which was not surprising given the fact that these subjects were recruited based on their referral for special education services. Also, 40% of the students lacked basic Spanish language skills. These findings support the research on "semi-lingualism," which stipulates that children with limited proficiencies in both their native and acquired languages are at greatest risk for academic failure and special education placement (Artiles & Klinger, 2006; Bialystok, 2001; Artiles et al., 2005). In this way, the findings support the theory that poor academic outcomes for ELL children can be negatively impacted by focusing instruction in English when a minimum threshold of proficiency has not been met in one's native language, as the

language systems in the brain haven't been adequately developed in order to make a successful transition to a second language (Artiles & Klinger, 2006; Bialystok, 2001; Reese et al, 2000). Genessee et al. (2005) argue that more time developing English language skills may help ELL students with limited native-language skills to develop literacy in English and overcome initial handicaps caused by inadequate, analogous primary language skills. Future research should include a larger number of participants representing a wider array of primary and second language abilities, with adequate numbers representing special education and non-special education eligible students. This research should utilize cognitive academic language proficiency and basic interpersonal communication skills scores (obtained through the Woodcock Muñoz Language Survey) and examine the predictive validity of varying levels of bilingualism on measures of academic achievement. Such research may help clarify Abedi's (2008) questions regarding the lack of a strong relationship between ELL status and English language proficiency.

The HLS, Language Proficiency and Academic Achievement

Parent responses to the HLS were examined as they related to language proficiency and academic achievement as an exploration into the validity of this measure. The results showed that the overwhelming majority of students first began to speak in Spanish. However, this finding had no significant relationship with any outcome measures, which supported the hypothesis that the HLS would not garner important information regarding students' language and academic needs. In contrast, similar to the BPI, student use of Spanish at home as reported on the HLS was significantly correlated with lower English Language Proficiency and higher Spanish Language Proficiency. Also similar to results from the BPI, the results from the HLS also indicated that children whose parents preferred to

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use Spanish at home and who lived in Spanish-dominant households had lower levels of English Language Proficiency. These findings suggest that questions from the HLS regarding language preferences in the home environment have important ramifications, contrary to the original hypothesis regarding the utility of this measure. Specifically, these findings suggest that it is important to ask parents about what languages they and their children prefer to use at home, as the responses to these questions are strongly correlated to English Language Proficiency, which is, in turn, strongly correlated with English tests of academic achievement. Therefore, screening students' home language preferences may, in fact, help educators screen ELL students at-risk for academic failure as well, if not better than, more comprehensive questionnaires.

The results from the BPI correlational analyses indicated that home language preference had no relationship with academic achievement in English but that greater student use of Spanish at home led to higher levels of academic achievement in Spanish. It is possible that the results from the HLS would have corroborated these findings, yet such comparisons couldn't be made with the limited number of subjects. Only one study to date has made such comparisons, and the findings suggested that there were major differences between the background language information reported in a comprehensive background questionnaire and the HLS (Abedi et al., 1997). Future research should include greater numbers of subjects in order to have the statistical power necessary to examine the concurrent validity of the HLS and BPI independently and assess their convergent validation with each other.

The results from this study indicated that questions from the HLS are better correlated with both English language proficiency and Spanish language proficiency than are

questions from the BPI. Comparisons on measures of academic achievement could not be made due to the fact that neither the HLS nor the BPI was significantly correlated with either English or Spanish language achievement. There are no similar studies in the research, as the limited amount of research conducted on the HLS pertains to its use in classification procedures in different states. Some researchers have hypothesized that a more comprehensive background questionnaire will better predict student outcomes (Abedi, 2008; Clements et al., 1992), and yet this study contradicts such predictions. Future research should replicate this study with a larger sample size so as to allow for analyses of the measures' predictive validity. The limited sample size in the present study necessitated a correlational design and average Fisher's z conversions for the HLS and BPI were utilized to measure their relative utility. The BPI has 41 questions compared to the HLS, which only has four. Also, composite factors for the BPI were abandoned because of limitations related to a small sample size. A larger sample may have afforded the use of composites, which would have, in turn, reduced the number of weakly correlated items. In addition, it is possible that either the BPI, or the HLS (or both) had weak content validity with measures of language preferences, as the questions from the BPI appeared to measure language choice while the HLS appeared to measure language dominance. There is no research to date that explores these differences, though results from this study suggest that language dominance may be of greater importance in regards to student language skills. In general, however, these findings highlight the importance of considering the language backgrounds of students and their families when investigating the relationship between ELL status, language proficiency and academic achievement. Although many demographic factors are linked to ELL students' academic success, it may be sufficient to ask a limited number of questions when screening these students for academic difficulties. This scenario is preferable from the

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point of view of school officials, as there is no support for abandoning current practices in favor of a more time-consuming and costly screening process.

Implications for School Psychologists

The results of this study highlight the difficulties that educational professionals face in providing services to ELL students in terms of accurate identification, assessment and progress monitoring procedures. If the education gap of ELL students is to be reduced, then improved procedures for identifying at-risk ELL students should be the first step in the effort. The findings from this study support the use of the HLS and indicate that asking questions regarding home language preferences helps identify students who may be at-risk for academic failure. Until more large-scale studies of the HLS are conducted, it may be prudent for school psychologists to encourage staff at their schools to follow Clements et al.'s (1992) suggestions for best practice, including: conducting the HLS in-person (in the parents' native language when necessary), clearly articulating the reasons for using the measure, ensuring confidentiality, and expressing students' legal rights to education despite immigration status. In this leadership role, school psychologists may be able to improve accuracy of parent responses and obtain valuable information regarding students' educational needs.

In turn, this information may help psychologists in their assessments when such students are referred for evaluations. In the absence of reliable and valid measures for differentiating between an endogenous disability and the effects of a language delay, school psychologists should ensure adequate data collection on students' and their families' language backgrounds. Although it is unclear if a more comprehensive background questionnaire is more effective for screening purposes at the school-level, such information may prove

extremely useful when conducting individual assessments. For example, the findings that more time living in the U.S. correlated with higher levels of English Language Proficiency suggests that school psychologists need to take extra caution when classifying younger students with learning disabilities. In this way, the presence of a discrepancy between cognitive functioning and academic performance may obscure the lack of advanced levels of proficiency needed for academic success, which may take up to 5-10 years to develop (Collier, 1989; Cummins, 1981; Hakuta et al., 2000).

The findings in this study support research that demonstrates that higher English Language Proficiency correlates with higher levels of English-language achievement scores. For this reason, school psychologists should ensure frequent re-evaluations for ELL/Learning Disabled students, as changes in English Language Proficiency resulting from exposure to bilingual instruction may have significant implications for qualification of a Learning Disability. For example, a promising line of research involves curriculum-based assessment to help with referral decisions for ELL students struggling to read (Barrera, 2003). Currently, the system for evaluation of English Language Proficiency varies between states and districts, although federal guidelines stipulate that ELLs can be given state-wide achievement tests in their native language for up to five years and individually assessed in their native language for up to three years (Ragan & Lesaux, 2006). For school psychologists working in districts where there is minimal testing in native languages, it may behoove them to conduct their own testing, in both cognitive and academic domains, in students' native language beyond the 3-5 year mark. Furthermore, even if language proficiency data are available, such information may be outdated and thus unusable for making decisions regarding student's current performance (Rhodes et al., 2005). In addition, school

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psychologists can play an important role in advocating for the use of valid measures for tracking the learning progress of ELL students.

In general, more school psychologists need to be trained in bilingual assessment, as demographic trends indicate that 5.4 million Limited English Proficient students will enter the public school system between 2005 and 2020 (Fry, 2008). In fact, Ochoa, Rivera and Ford's (1997) research demonstrates that 83% of school psychologists working in states with large populations of Hispanics did not receive adequate training to conduct bilingual assessments and 56% were not able to interpret assessment results. Research consistently shows that native language is often minimized or ignored in the evaluation of ELL students for special education placements (Klinger et al., 2006). Indeed, there are major differences in the way a bilingual child learns and school psychologists can play a critical role in relaying this information to parents, teachers and administrators. As Paradis and Genesse's (1996) research demonstrates, the development of two different languages is fundamentally distinct from the development of a single language. When addressing ELL students referred for special education, it is important for school psychologists to address issues of "semi-lingualism," as ELLs without age-appropriate language skills in either native or second languages, have the highest prevalence of special education placements compared any other ethnic/racial group (Artiles et al.,2005; Gandara et. al, 2003).

Although it was beyond the scope of this study, research highlights several critical avenues for effective interventions to improve language skills and academic achievement, including improving phonological awareness, vocabulary knowledge, and knowledge of letter-sound relations, as well as increasing the time spent being read to in one's native language at home (Betts, 2009; Genesee et al., 2005; Reese et al., 2000;). In addition to

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incorporating these suggestions in their evaluations for specific students, school psychologists should advocate for the development, and implementation of, effective, early intervention, Tier 1 programs.

Limitations

The findings from this correlational, within-group study must be regarded as tentative for several reasons. The small sample size and limited stratification within this study limited the statistical analyses conducted. The study originally proposed inclusion of at least 76 subjects, the minimum number to attain sufficient statistical significance for regression analyses. However, this was impossible once it came to light that the parent interviews were missing from over 300 files. To compound the issue, high transience within the district rendered an additional 88 identified subjects ineligible. In the end, the remaining 42 subjects from one elementary school seriously impacted the ability to generalize the findings to other ELL groups. In addition, the small sample size limited the predictive ability of statistical analyses, although it should be stated that the research base is similarly limited in the prevalence of correlational studies (Genesse et al., 2005). Furthermore, the small sample size impacted the ability to conduct factor analyses for grouping conceptually related items together as anticipated. These procedural shortcomings made it necessary to study single-item measures, which are known to be highly unreliable. The nature of the parent interview questions, which were of self-report format, also calls into question the validity of the information garnered, since parents may not have been able to accurately judge their own or their children's behavior, or could have been influenced by different interpretations of the questions. Although information from the parents' interview was

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correlated with information provided in parent responses to the HLS, the present study did not include systematic use of direct observational data.

In general, the lack of psychometric support for the BPI and the HLS suggests that these measures may not have been adequately valid or reliable overall (although that was beyond the scope of this study to explore). In addition, the original proposal sought to use language proficiency measures obtained through the Woodcock Muñoz Language Survey so as to obtain more accurate findings in terms of students' relative bilingualism, yet incomplete data made this impossible. Instead, information from state-wide achievement tests were used as proxies for English and Spanish language proficiencies, which are not specifically designed to capture students' cognitive academic language proficiency and basic interpersonal communication skills levels. In fact, the Language Assessment Scales have been criticized for its weak concurrent validity with language proficiency statuses (Abedi, 2005). Furthermore, information from student records was collected from various time points, so historical effects may have influenced comparisons of measures.

A final limitation is the lack of information regarding students' underlying intellectual abilities, as cognitive functioning is an important factor to examine when assessing the academic potential for students enrolled in special education placements.

Future Research

Although there has been much theoretical speculation and some research regarding the demographic predictors of ELL student success, more research is needed to build consensus in this area. Future research should continue to explore the effects of the various socio-cultural factors examined in this study as well as incorporate pertinent information regarding the type of instruction utilized in classrooms as they affect the language

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proficiency and academic outcomes of ELL students. Such larger scale studies with nationally representative samples can help reveal antecedent, environmental events to the underperformance of ELL students. Adequate stratification of these factors can help to make meaningful group comparisons between ELL students at various levels of language and literacy development. Additionally, more research should examine these effects from a longitudinal perspective, such that patterns of language development in both primary and second languages can be assessed, as they relate to academic achievement over time. Given the fact that the majority of research in this field is correlational in nature, the implementation of regression studies can reveal important trends that can help school personnel to accurately identify students who are at-risk for school failure and, in turn, enroll these students in early-intervention programs. While the research base in this area is growing, more studies are needed in order to develop a more nuanced understanding of these issues.

In addition, more research is needed that focuses specifically on ELLs with learning disabilities. As Genessee et al. (2005) indicate, the inclusion of more detailed profiles of ELL/Learning Disabled students would improve the effort to accurately identity and assess this population. Comparisons between ELL/ Learning Disabled students and their typical peers, as well as between ELL/ Learning Disabled students who remain in special education and those who exit out, would help illuminate the myriad of issues that make it difficult to accurate identify and assess learning disabilities within ELL populations. As McCardle et al. (2005) state, "the ability to accurately identify and assess the ELL/ Learning Disabled population is one of the fundamental research questions that must be answered in order to know how to best serve them" (pg. 3). Future research should incorporate cognitive academic language proficiency scores in both native and second languages in order to clarify

the impact of various levels of bilingualism on special education and English-as-a-Second Language placements.

A second important line for future research is to implement more studies examining the effectiveness of various identification policies of ELL students. Federal policy allows for states and districts to implement their own procedures for monitoring the progress of ELL students and more information is needed to evaluate the effectiveness of various policies. Specifically, more pilot studies are needed to evaluate the screening and identification measures used in various school districts in order to evaluate the technical adequacy of the HLS and compare its utility to other screening measures. It is hoped that such research will help in the development of a universal statewide requirement for identification and classification of ELLs that ensures that these students receive appropriate educational placements as they progress through their education.

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APPENDIX A

ADDITIONAL ANALYSES

Do any of the demographic variables obtained from the Parent Interview predict students' language proficiency scores in both English and Spanish?

To answer this question, multiple regressions were used to determine if the components of ESL Service Recipient (IV), SES (IV), Prior Educational Experience (IV), Time Spent in the U.S. (IV), Transience (IV), Home Literacy Practices (IV), Parental Language Profile (IV) and Student Home Language Preferences (IV) singly and in combination predict the ability to determine English Language Ability (DV), Spanish Language Ability (DV), and Bilingual Profile (DV).

English Language Ability. ESL was originally planned as a predictor variable, however, all but one student was involved in ESL services. Therefore, ESL was removed from all subsequent analyses. Results show that there is a positive relationship between the predictive factors from the BPI and English language proficiency (r=.708). Fifty percent of the explained variance in English Language proficiency (R^2=.501) can be accounted for through the combined linear effects of the predictor variables. The overall equation was found to be statistically significant (F=4.01, p=.004), as seen in table 17 below. From this equation, students time in the U.S. was the only variable with a significant impact on English Language proficiency (b=.584, p=.008). It was found that the more years spent in the U.S. by the student, the greater their English language proficiency.

Table 17.

Summary of Linear Regression Analysis for Variables Predicting English Language Ability.

Variable	B	SE B	β
Socioeconomic Status	-.010	.081	-.016
Prior Educational Experience	-.085	.144	-.093
Transience	-.008	.137	-.010
Home Literacy Practices	-.053	.189	-.038
Parental Language Profile	-.152	.157	-.149
Student Home Language Preference	-.193	.239	-.144
Students' Time in the U.S.	.139	.049	.584*

*p < .05

Spanish Language Ability. A weak to moderate relationship was found between Spanish Language Proficiency and the predictor variables from the BPI (r=.421). A total of 17.8% of the variance was accounted for by the BPI predictor variables. However, as seen in table 18 below, the model itself is not significant (F=.833, p=.569). Therefore, the BPI does not predict Spanish language ability.

Table 18.

Summary of Linear Regression Analysis for Variables Predicting Spanish Language Ability.

Variable	B	SE B	β
Socioeconomic Status	-.023	.208	-.020
Prior Educational Experience	-.305	.364	-.170
Transience	.423	.347	.252
Home Literacy Practices	-.148	.491	-.054
Parental Language Profile	-.393	.453	-.183
Student Home Language Preference	.228	.612	.087
Students' Time in the U.S.	-.156	.126	-.334

*p < .05

Bilingual Profile. There was a weak to moderate relationship between the BPI

predictor variables entered into the equation and the Bilingual Profile (R=.370). A total of

13.7% of the variance could be accounted for by the variables used for inclusion. Overall,

the regression equation was not statistically significant (F=.610, p=.742) as seen in table 19

below. The BPI thus does not predict students' bilingual profiles.

Table 19.

Summary of Linear Regression Analysis for Variables Predicting Bilingual Profile.

Variable	B	SE **B**	β
Socioeconomic Status	-.209	.237	-.161
Prior Educational Experience	-.079	.414	-.040
Transience	.207	.394	.112
Home Literacy Practices	-.529	.557	-.174
Parental Language Profile	-.120	.514	-.050
Student Home Language Preference	-.757	.694	-.262
Students' Time in the U.S.	.028	.143	.055

*p< .05

Do any of the demographic variables obtained from the Parent Interview predict students' academic

achievement?

To answer this question, multiple regressions were used to determine if the

components of SES (IV), Prior Educational Experience (IV), Time Spent in the U.S. (IV),

Transience (IV), Home Literacy Practices (IV), Parental Language Profile (IV) and Student

Home Language Preferences (IV) singly and in combination predict the ability to obtain

higher levels of academic achievement (DV).

Academic Achievement in English. There was a moderate to strong relationship between

the predictor variables and academic achievement in English (r=.597). A total of 35.7% of

the variance was accounted for by the predictor variables used for inclusion (R^2=.357). The

overall equation was not found to be statistically significant (F=1.824, p=.131) as seen in table 20 below.

Table 20.

Summary of Linear Regression Analysis for Variables Academic Achievement in English.

Variable	B	SE B	β
Socio-Economic Status	-.268	.115	-.418*
Prior Educational Experience	-.393	.198	-.401
Transience	-.104	.182	-.116
Home Literacy Practices	-.231	.259	-.155
Parental Language Profile	-.161	.271	-.126
Student Home Language Preferences	.538	.342	.387
Students' Time in US	.178	.068	.693*

*p<.05

Academic Achievement in Spanish. There was a strong and positive relationship between academic achievement in Spanish and the seven predictor variables included in the equation (r=.809). A large portion of the variance (R^2=.6544) was accounted for by the predictor variables selected for inclusion and the overall equation is statistically significant (F=4.327, p=.007) as seen in table 21 below. From this equation, four predictor variables were found to have a significant impact on academic achievement in Spanish: socioeconomic status (b=-.403, p=.025), prior educational experience (b= -.398, p=.032), home literacy practices (b= -.445, p=.015), and student home language preferences (b=.557, p=.008). Three of the variables had a negative relationship, such that the lower the socioeconomic status, the less prior educational experience and the lower the levels of home literacy reported at home, the higher were the levels of academic achievement in Spanish. In addition, the more the student preferred to speak Spanish at home, the higher were their levels of academic achievement in Spanish.

Table 21.

Summary of Linear Regression Analysis for Variables Academic Achievement in Spanish.

Variable	B	SE B	β
Socio-Economic Status	-.408	.165	-.403*
Prior Educational Experience	-.487	.207	-.398*
Transience	-.122	.311	-.076
Home Literacy Practices	-1.006	.367	-.445*
Parental Language Profile	-.489	.299	-.297
Student Home Language Preferences	1.189	.389	.577*
Students' Time in US	-.029	.072	-.071

*p<.05

Does language proficiency in L1 and L2 predict academic achievement?

To answer this question, multiple regressions were used to determine if components of English language ability (IV), Spanish Language Ability (IV), and Bilingual Profile (IV) singly and in combination predict the ability to obtain higher levels of academic achievement (DV).

Academic Achievement in English. Analyses suggested a weak to moderate relationship between the three predictor variables and academic achievement in English (r=.412) with 17% percent of the variance accounted for by these variables. The regression equation was not found to be statistically significant (F=2.245, p=.101) and none of these variables were found to significantly impact academic achievement singly as seen in table 22 below. Therefore, students' language abilities were not found to predict academic achievement in English.

Table 22.

Summary of Linear Regression Analysis for Language Variables Predicting Academic Achievement in English.

Variable	B	SE B	β
English Language Proficiency	.516	.291	.504
Spanish Language Proficiency	.076	.139	.129
Bilingual Profile from table (use this)	-.069	.163	-.140

*p<.05

Spanish Achievement. A weak to moderate relationship was found between L1 proficiency, L2 proficiency, bilingual profile and academic achievement in Spanish (r=.454) and these predictor variables accounted for 20.6% of the variance in the regression equation. The regression equation was not found to be statistically significant (F=2.162, p=.118) as seen in table 23 below. None of the predictor variables singly predicted Spanish achievement and it was determined that language proficiencies do not predict academic achievement in Spanish.

Table 23.

Summary of Linear Regression Analysis for Language Variables Predicting Academic Achievement in Spanish.

Variable	B	SE B	β
English Language Proficiency	-.188	.404	-.098
Spanish Language Proficiency	.343	.218	.489
Bilingual Profile from table (use this)	-.033	.288	-.039

*p<.05

Is the HLS a predictor of students' language proficiencies and academic achievement levels?

Is the HLS a predictor of students' language proficiencies in both English and Spanish?

To answer this question, multiple regressions were used to determine if the components of HLSQ1-HLSQ4 (IVs) predict the ability to determine English Language Ability (DV), Spanish Language Ability (DV), and Bilingual Profile (DV).

English Language Proficiency. A weak to moderate relationship was found between the four HLS questions and English language proficiency (r=.490). The four HLS questions accounted for 24% of the equated variance. The regression equation was found to be statistically significant (F=2.198, p=..034) as seen in table 24 below. The only HLS that was found to significantly predict ELP was question two (b=-.2158, p=.038): "what language does your child most frequently use at home?" The second HLS question had a significant negative weight, indicating that after accounting for the other three HLS questions, those students with higher reported levels of Spanish use at home were expected to have lower levels of English language proficiency.

Table 24.

Summary of Linear Regression Analysis for HLS questions as predictor variables of English Language Proficiency.

Variable	B	SE B	β
HLSQ1	1.000	1.001	.200
HLSQ2	-2.658	1.232	-1.024*
HLSQ3	1.000	1.001	.279
HLSQ4	1.000	1.001	.338

*p<.05

Spanish Language Proficiency. A small to moderate relationship was found between the four HLS variables and Spanish language proficiency in this equation (r=.361). As seen in table 25 below, the equation was not found to be statistically significant (F=.270, p=.270) and only 13% of the variance could be attributed to the four predictor variables selected for inclusion. It was thus determined that the HLS is not a predictor of students' Spanish language proficiency.

Table 25.

Summary of Linear Regression Analysis for HLS questions as predictor variables of Spanish Language Proficiency.

Variable	B	SE B	β
HLSQ1	.000	2.028	.000
HLSQ2	4.000	2.494	.824
HLSQ3	-2.000	2.028	-.299
HLSQ4	-2.000	2.028	-.361

*p<.05

Bilingual Profile. A very weak relationship was found between the four predictor

variables selected for inclusion and bilingual profile categorization (r=.264) and only 7% of

the variance could be accounted for by the questions on the HLS. The model did not reach

statistical significance (F=.675, p=.614) as indicated in table 26 below. Therefore, it was

determined that the HLS does not predict students' bilingual profile.

Table 26.

Summary of Linear Regression Analysis for HLS questions as predictor variables of Bilingual Profile.

Variable	B	SE B	β
HLSQ1	3.000	2.318	.291
HLSQ2	-3.622	2.852	-.675
HLSQ3	2.000	2.318	.271
HLSQ4	2.000	2.318	.327

*p<.05

Is the HLS a predictor of students' academic achievement?

In order to answer this question, multiple regressions were used to determine if the

components of HLSQ1-HLSQ4 (IVs) predict academic achievement (DV).

Academic Achievement in English. A very weak relationship was found between the HLS

predictor variables and academic achievement in English (r=.256). As seen in table 27

below, only 6.6% of the variance accounted for could be attributed to these predictor

variables and the regression equation was not found to be statistically significant (F=.562, p=.692) Thus, it was determined that the HLS is not a predictor of students' academic achievement in English.

Table 27.

Summary of Linear Regression Analysis for HLS questions as predictor variables of academic achievement in English.

Variable	B	SE B	β
HLSQ1	1.000	1.192	.200
HLSQ2	-1.909	1.467	-.731
HLSQ3	1.000	1.192	.279
HLSQ4	1.000	1.192	.337

*p<.05

Academic Achievement in Spanish. Due to missing data and lack of variability within the HLS questions, a regression for the Academic Achievement in Spanish was unable to be conducted.

Post-Hoc Analyses:

Additional post-hoc analyses were conducted to further investigate the relationship between key variables in the study. Independent samples t-tests were conducted on all dichotomous variables to compare the scores of different groups on these outcome measures. The next section will discuss the results of these analyses.

Specific Learning Disability. On measures of Spanish Language proficiency, there was a significant difference in the scores for SLD (M=2.30, SD=1.09) and non-SLD subjects (M=3.36, SD=1.596), t(39)= 2.526, p=.016. These results indicate that individuals who have did not have a diagnosis of SLD scored higher on tests of Spanish language proficiency than their peers with SLD. A significant difference in the scores for SLD (M=1.76, SD=.944) and non-SLD students (M=1.14, SD=.359) were also found on measures of English Language proficiency, t(40)= -.2810, p=.008. However, these results are unusual, as the results were in

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the wrong direction for the relationship between SLD and ELP (e.g., non-SLD subjects scored higher on measures of English language proficiency).

In order to better understand this unusual finding, another set of independent samples t-test was run with grade level at time of English Language proficiency test, grade level at time of Spanish language proficiency test, grade level at time of academic achievement tests, and students' time in the US. A significant difference in grades at time of ELP testing was found between the SLD group (M=2.86, SD=2.41) and the non-SLD group (M=0.62, SD=1.396), t(40)= -3.678, p=.001. Similarly, students in the SLD group had significantly more years in the US (M=7.81, SD=3.108) than the non-SLD group (M=4.16, SD=2.139), t(39) -4.358, p=.000. These results demonstrate that students with SLD were in the U.S. almost twice as long and, on average, two grade levels above, their non-SLD peers, and better accounts for the improved performance in English Language Proficiency, despite a diagnosis of a SLD.

Special Education Placement. Independent samples t-tests were conducted comparing the means of students currently enrolled in special education with those without a current IEP using the English Language Proficiency, Spanish Language Proficiency, Bilingual Profile, Academic Achievement in English and Academic Achievement in Spanish as DVs. As expected, students without a current IEP (M=3.63, SD=1.383) had higher levels of Academic Achievement in Spanish than those with a current IEP (M=2.18, SD=1.181; t(39)=3.622, p=.001). However, the results for ELP and SLP were in the wrong direction, as students with current IEPs scored higher on both measures as seen in table 28 below.

Table 28.

Groups Statistics for Currently SPED students and non-currently SPED students on measures of ELP and SLP.

Group	Mean/SD ELP	Mean/SD SLP
Current SPED students	1.74(.915)	2.18(1.18)
Non-current SPED students	1.11(.315)	3.63(1.38)

For this reason, another independent samples t-test was conducted using student years in the U.S.. Students with a current IEP (M=7.91, SD=3.62) were in the U.S. more than twice as long as those without a current IEP (M=3.62, SD=1.391; t(39)= -5.606, p=.000), which could explain their increased English and Spanish proficiency.

ADDITIONAL DESCRIPTIONS OF PEARSON CORRELATION ANALYSES

Analyses

Are any of the demographic variables obtained from the BPI associated with students' language proficiency scores in both English and Spanish (as measured by the CELDT and the LAS-Links Español/Pre-LAS 2000)?

  To answer this question, Pearson correlations were used to estimate if the items from the BPI correlated significantly with English Language Proficiency, Spanish Language Proficiency, or the Bilingual Profile. A summary of the results is presented in Table 12 below.

Table 12.

Pearson Correlation Matrix among BPI Items and Language Outcomes.

		1	2	3
		Spanish Language Proficiency	English Language Proficiency	Bilingual Profile
1	Free or Reduced Lunch	-.20	0.32*	-.02
2	Currently SPED	-.50**	0.41**	-0.29
3	Previous IEP	-0.32*	-0.13	-0.45**
4	Parental Education Level	-0.04	0.01	-0.12
5	Parental Occupation	-0.17	0.18	-0.13
6	Student Years in US	-0.36*	0.69**	-0.06
7	Student Immigration Status	0.19	-0.03	0.17
8	Parents Immigration Status	0.28	-0.29	0.18
9	School Attendance Problems	0.02	0.23	0.15

Table 12, Continued.

		1	2	3
		Spanish Language Proficiency	English Language Proficiency	Bilingual Profile
10	Frequent Moves	-0.05	0.06	-0.02
11	Immigration Gaps	-0.03	-0.01	-0.05
12	Family Intactness	0.18	-0.01	0.21
13	Previous Educational History in Home Country	0.28	-0.24	0.23
14	Preschool Experience	0.02	0.28	0.11
15	Family History of Learning Difficulties	-0.07	-0.09	-0.14
16	Student History of Learning Difficulties	-0.03	0.08	0.08
17	Parents Declared English Competence	0.01	-0.21	-0.01
18	Parents Oral Home Language Preferences	0.30	-0.45**	0.15
19	Parents Oral Language Preference at School	0.10	0.02	0.12
20	Student Language Preferences at Home	0.27	-0.52**	0.03
21	Family Reading	0.02	-0.32**	-0.19
22	Family Story Telling	-0.18	0.21	-0.01
23	Students age at time of BPI	-0.21	0.65**	0.08
24	Number of Household Members	0.01	0.09	-0.02
25	Gender	-0.18	-0.01	-0.19
26	Spanish Language Proficiency		-0.07	0.81
27	English Language Proficiency	-0.07		0.31
28	Bilingual Profile	0.81**	0.31*	

Spanish Language Proficiency. There was a negative correlation between students'
current special education placement and Spanish language proficiency (r(41)= -.502, p=.001).
Being in a special education placement was associated with decreases in scores on a test of
Spanish Language Proficiency. As a secondary check of these results, an independent
samples t-test was conducted. Students with no current IEP (M=3.63, SD=1.38) scored
significantly higher in Spanish language proficiency compared to those with a current IEP
(M=2.18, SD= 1.18; t(39)= 3.62, p=.001).

There was also a negative correlation between students' previous special education
placement and Spanish language proficiency (r(41)= -.319, =.042), such that students with
previous special education placements were associated with decreases in scores on a test of
Spanish Language Proficiency. As a secondary check of these results, an independent
samples t-test was conducted. Levene's test for equality of variances was found to be
violated for the present analysis, F (39, 10.24)= 5.55, p= 0.24. Owing to this violated
assumption, a *t* statistic not assuming homogeneity of variance was computed. Results
indicated that students not previously in a special education placement (M=4.25, SD=0.50)
were significantly higher than those previously in a special education placement (M=2.70,
SD=1.45; t(10.23)=4.48, p=.001) on Spanish language proficiency.

There was a negative correlation between the number of years a student had been in
the U.S. and Spanish language proficiency (r(41)= -.355, p=.025). Overall, this indicated that
more years in the U.S. was associated with decreased scores on the test of Spanish language
proficiency.

Correlations were also computed to assess the relationship between Spanish Language Proficiency and Parents' home language preferences (r(41)=.301, p=.056). While not significant, the correlation approached significance and suggested that parents who used more Spanish at home tended to have children with higher scores on a test of Spanish language proficiency. As a secondary check of these results, a one-way ANOVA was conducted. There was not a significant effect of parents' home language preferences at the p<.05 level for the three parent home language preference groups [F(2,38)=2.44, p=.10].

English Language Proficiency. There was a positive relationship between free or reduced lunch status and English language proficiency (r(42)=.317, p=.041). This indicated that students who were not eligible for free or reduced lunch correlated with higher levels of English language proficiency. However, this result is meaningless due to insufficient variability in the sample (n=41 were eligible for free or reduced lunch status, n=1 who did not qualify for free or reduced lunch status).

There was also a positive relationship between current special education placement and English language proficiency (r(42)=.414, p=.006). This indicated that current special education placement was correlated with higher levels of English language proficiency. As a secondary check of the results, an independent samples t-test was conducted. Levene's test for equality of variances was found to be violated for the present analysis (F(40,28.1)= 24.1, p<.01). Owing to this violated assumption, a *t* statistic not assuming homogeneity of variance was computed. Results indicated that students who were currently in special education (M=1.74, SD=0.92) were significantly higher in English language proficiency than those students who were not in special education placements (M=1.11, SD=0.32; t(28.1)= -3.11, p=.004). Given the surprising nature of this result, other variables related to special

education placement were also examined. An independent samples t-test was conducted and Levene's test for equality of variances was found to be violated, so a t statistic not assuming homogeneity of variance was computed, $F (39, 35.57) = 18.07$, $p < .01$. It was found that students who were in special education placements had also been living in the US significantly longer (M=7.91, SD=2.99) than those students who were not in special education placements (M=3.62, SD=1.29; $t(35.57)= -6.07$, $p< .01$). This better accounts for the relationship between special education placement and English language proficiency.

As expected after examining the previous result, there was a positive correlation between students years in the US and English language proficiency ($r(42)=.691$, $p<.001$). This indicated that more years residing in the U.S. correlated with higher levels of English language proficiency.

There was a negative correlation between parents' oral home language preferences and measures of students English language proficiency ($r(42)= -.447$, $p=.003$). This indicated that having parents who more often liked to speak Spanish at home was associated with lower scores on the test of English language proficiency.

There was a negative correlation between students home language preferences and measures of students English language proficiency ($r(42)= -.517$, $p<.001$). This indicated that students who preferred to use Spanish at home were more likely to have lower levels of English language proficiency. As a secondary check of the results, a one-way ANOVA was conducted. There was a significant effect of students' home language preferences at the $p<.05$ level for the three student home language preference groups [$F(2,39)=13.9$, $p<.01$]. Post hoc comparisons using the Tukey HSD test indicated that the mean score for students with a preference for using English at home (M=3.50, SD=0.71) was significantly higher

than students speaking both English and Spanish at home (M=1.50, SD=0.72). In addition, students speaking English at home (M=3.50, SD=0.71) were also significantly higher than students speaking Spanish only in the home (M=1.13, SD=0.34). Finally, those students speaking both English and Spanish were significantly higher in English language proficiency than those speaking only Spanish.

There was a negative correlation between self-reports of family reading at home and students' English language proficiency (r(39)= -.323, p=.045). This indicated that parent reports of family reading was associated with lower levels of English Language Proficiency. As a secondary check of the results, an independent samples t-test was conducted. Levene's test for equality of variances was found to be violated for the present analysis, $F_{(37, 5.5)}$= 8.94, p=.005. Owing to this violated assumption, a t statistic not assuming homogeneity of variance was computed. Results indicated that there was not a significant difference in the English language proficiency scores for those family who read with their children (M=1.33, SD=.60) compared to those who did not read (M=2.0, SD=1.27; t(5.5)= 1.27, p=.257). This finding does not support the conclusion found in the Pearson correlation analysis.

There was a negative correlation between students' age at time of the parent interview and students' English language proficiency (r(42)= -.649, p<.001), indicating that being older was associated with higher levels of English Language proficiency.

Bilingual Profile. There was a negative correlation between previous special education placement and student's Bilingual Profile (r(41)=-.447, p=.003), indicating that previous enrollment in special education instruction was associated with lower levels of language development in both L1 and L2. As a secondary check of the results, an independent samples t-test was conducted. Levene's test for equality of variances was found to be

violated for the present analysis (F(39, 3.12)= 8.39, p=.006). Owing to this violated

assumption, a *t* statistic not assuming homogeneity of variance was computed. Results

indicated that there was not a significant difference in the Bilingual Profile scores for

students previously in special education (M=2.19, SD=1.26) compared to those with no

special education history (M=4.50, SD=3.0; t(3.16)= 1.53, p=.221). This finding does not

support the conclusion found in the Pearson correlation analysis. There were no additional

variables significantly correlated with students Bilingual Profile.

Are any of the demographic variables obtained from the BPI associated with students' academic achievement (as measured by the state-wide achievement tests from the STAR program)?

  To answer this question, Pearson correlations were used to estimate if items from

the BPI significantly correlated with academic achievement in English and Spanish. A

summary of the results is presented in Table 13 below.

Table 13.

Pearson Correlation Matrix among BPI items and Academic Outcomes.

		26	27
		Academic Achievement in Spanish	Academic Achievement in English
1	Free or Reduced Lunch	.[b]	0.18
2	Currently SPED	-0.51**	0.02
3	Previous IEP	0.12	0.17
4	Parental Education Level	-0.17	-0.30
5	Parental Occupation	0.02	-0.01
6	Student Years in US	-0.41*	0.22
7	Student Immigration Status	0.02	0.05
8	Parents Immigration Status	0.17	0.08

Table 13, Continued.

		26 Academic Achievement in Spanish	27 Academic Achievement in English
9	School Attendance Problems	-0.03	0.12
10	Frequent Moves	-0.18	0.01
11	Immigration Gaps	-0.03	-0.09
12	Family Intactness	-0.34	-0.16
13	Previous Educational History in Home Country	-0.01	-0.25
14	Preschool Experience	0.09	0.10
15	Family History of Learning Difficulties	-0.26	-0.31
16	Student History of Learning Difficulties	-0.36	-0.21
17	Parents Declared English Competence	-0.05	0.11
18	Parents Oral Home Language Preferences	0.31	-0.10
19	Parents Oral Language Preference at School	0.33	0.17
20	Student Language Preferences at Home	0.38*	-0.04
21	Family Reading	0.13	-0.17
22	Family Story Telling	-.47*	-0.09
23	Students age at time of BPI	-.38*	.108
24	Number of Household Members	0.19	0.17
25	Gender	0.24	0.04

* p <.05

** p <.01

b. cannot be computed because at least one of the variables is constant

Academic Achievement in English. No variables on the BPI correlated significantly with academic achievement in English.

Academic Achievement in Spanish. There was a negative correlation between current special education status and measures of academic achievement in Spanish ($r(29)$= -.510, p=.005). This indicated that special education qualification was significantly associated with lower levels of academic achievement in Spanish. As a secondary check of the results, an independent samples t-test was conducted. Levene's test for equality of variances was found to be violated for the present analysis ($F(27, 22.1)$= 7.31, p=.012). Owing to this violated assumption, a *t* statistic not assuming homogeneity of variance was computed. Results indicated that there was a significant difference in the academic achievement in Spanish scores for students currently in special education (M=2.08, SD=0.49) and students not currently in special education (M=3.06, SD=1.06; $t(22.07)$= 3.30, p=.003).

There was a negative correlation between number of years the student lived in the U.S. and academic achievement in Spanish ($r(28)$= -.409, p=.031), indicating that more time living in the U.S. was associated with lower scores of academic achievement in Spanish.

There was a positive correlation between student language preferences at home and academic achievement in Spanish ($r(29)$=.381, p=.041) which indicated that greater use of Spanish at home by the student was associated with higher levels of academic achievement in Spanish. As a secondary check of the results, a one-way ANOVA was conducted. It was found that there were no Spanish academic achievement scores for students who reported only speaking English in the home. Therefore, a t-test was conducted to compare the remaining two groups (those who spoke both English and Spanish at home, with those who

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only spoke Spanish). Students who spoke only Spanish at home (M=3.0, SD=1.1) had significantly higher academic achievement in Spanish than those who spoke both English and Spanish at home (M=2.27, SD=0.71; t(27)= -2.14, p=.041).

There was a negative correlation between parents reports of family story telling and academic achievement in Spanish (r(29)= -.467, p=.011). This indicated that more family story telling was associated with lower levels of academic achievement in Spanish. As a secondary check of the results, an independent samples t-test was conducted. Results indicated that there was a significant difference in the academic achievement in Spanish scores for students whose parents reported they told their children stories and those who reported that they did not. Students whose parents report that they read stories to their children had significantly lower academic achievement in Spanish (M=2.39, SD=0.84) than those whose parents report that they don't read stories to their children (M=3.50, SD=1.05); t(27)= 2.74, p=.011.

There was also a negative correlation between students' ages at the time of the parent interview and academic achievement in Spanish (r(29)= -.379, p=.042). This indicated that being older was associated with decreases in academic achievement in Spanish.

Is language proficiency in L1 and L2 associated with academic achievement?

To answer this question, Pearson correlations were used to estimate if English language ability, Spanish Language Ability, or the Bilingual Profile correlated significantly with academic achievement in English and Spanish. A summary of the results are presented in Table 14 below.

Table 14.

Pearson Correlation Matrix Among Language Proficiencies in L1 and L2 and Academic Outcomes.

	Spanish Language Proficiency	English Language Proficiency
Academic Achievement in Spanish	0.44*	0.04
Academic Achievement in English	-0.03	0.40*

* p <.05.

** p <.01

There was a positive relationship between Spanish Language Proficiency and academic achievement in Spanish (r(29)=.440, p=.017). This indicated that higher levels of Spanish Language proficiency was associated with higher levels of academic achievement in Spanish. As a secondary check of the results, a one-way ANOVA was conducted looking at the five Spanish Language Proficiency levels (Beginner Spanish, Early Intermediate Spanish, Intermediate Spanish, Advanced Spanish, and Fluent Spanish). There was a significant effect of students' Spanish language proficiency scores at the p<.05 level for the five Spanish language proficiency groups [F(4,24)=3.0, p=.038]. Post hoc comparisons using the Tukey HSD test indicated that students in the Early Intermediate Spanish group (M=2.17, SD=0.41) were significantly lower in academic achievement in Spanish than those in the Fluent Spanish group (M=3.8, SD=0.45). There were no other significant differences between the five groups.

There was also a positive correlation between English Language Proficiency and academic achievement in English (r(37)=.402, p=.014), such that higher levels of English language proficiency were associated with higher levels of academic achievement in English. As a secondary check of the results, a one-way ANOVA was conducted looking at the four

English Language Proficiency groups (Far Below Basic, Below Basic, Basic, and Proficient). There was a significant effect of students' English language proficiency scores at the $p<.05$ level for the four English language proficiency groups [$F(3,33)=3.85$, $p=.018$]. However, because there was insufficient variability in the "Proficient English" category for English language proficiency, this variable was removed from the analysis and a post hoc comparison using the Tukey HSD test was conducted. These results indicated that students with "Far Below Basic" English skills (M=1.92, SD=0.72) were significantly lower in academic achievement in English than those in the "Basic" English group (M=3.25, SD=0.5). There were no significant differences between "Far Below Basic" and "Below Basic" (M=2.29, SD=.951) groups.

Finally, there was a positive correlation between academic achievement in English and Spanish ($r(29)=0.629$, $p<.01$). This indicated that higher levels of academic achievement in English significantly correlated with higher levels of academic achievement in Spanish.

Is the HLS associated with student's language proficiencies in both English (CELDT) and Spanish (LAS-Links Español/Pre-LAS 2000)?

To answer this question, Pearson correlations were used to estimate if questions one through four on the HLS correlated significantly with English Language Ability, Spanish Language Ability, or the Bilingual Profile. A summary of the results is presented in Table 15 below.

Table 15.

Pearson Correlation Matrix Among HLS Questions and Language Proficiency Outcomes.

	Spanish Language Proficiency	English Language Proficiency	Bilingual Profile
HLS Question 1	0.20	-0.11	0.14
HLS Question 2	0.31*	-0.45**	-0.07
HLS Question 3	0.13	-0.31*	-0.08
HLS Question 4	0.23	-0.32*	0.01

* p<.01

** p<.05

The second question from the HLS ("what language does your child use most frequently at home?") significantly and positively correlated with Spanish language proficiency (r(41)=.309, p=.049). This indicated that students who more frequently use Spanish at home were more likely to have higher levels of Spanish language proficiency. As a secondary check of the results, an independent samples t-test was conducted. Results indicated that students who frequently used Spanish at home were significantly higher in Spanish language proficiency (M=3.0, SD=1.43) than students who did not speak Spanish at home (M=1.50, SD=1.0; t(39)= -2.03, p=.049).

Similarly, the same question from the HLS was negatively correlated with English language proficiency (r(42)= -.446, p=.003), indicating that speaking Spanish at home was associated with lower levels of English language proficiency. As a secondary check of the results, an independent samples t-test was conducted. Results indicated that students who

used Spanish at home were significantly lower in English language proficiency (M=1.34, SD=0.71) than students who did not speak Spanish at home (M=2.5, SD=0.57; t(40)= 3.15, p=.003).

The third question from the HLS ("what language do you use most frequently to speak to your child?") was negatively correlated with English language proficiency (r(42)= -.307, p=.048). This finding suggested children who are spoken to in Spanish by their parents were more likely to have lower levels of English language proficiency. As a secondary check of the results, an independent samples t-test was conducted. Results indicated that students who are spoken to in Spanish by their parents were significantly lower in English Language proficiency (M=1.4, SD=0.41) than students who are not spoken to in Spanish at home by their parents (M=2.5, SD=0.71; t(40)= 2.04, p=.048).

Finally, the fourth question from the HLS ("name the language most often spoken by the adults at home") was negatively correlated with English language proficiency (r(42)= -.321, p=.038). This result indicated students from homes with Spanish as the predominant home language were more likely to have lower levels of English language proficiency. As a secondary check of the results, an independent samples t-test was conducted. Results indicated that students from Spanish predominant homes were significantly lower in English language proficiency (M=1.38, SD=0.75) than students from non-Spanish dominant homes (M=2.33, SD=0.58; t(40)= 2.14, p=.038).

Is the HLS associated with students' academic achievement?

In order to answer this question, Pearson correlations were used to estimate if questions one through four on the HLS correlated significantly with academic achievement in English and Spanish. Unfortunately, there were only a few respondents who had indicated

English for each of those four questions, and all of those students for whom English was indicated for any one of the four items were also missing an Academic Achievement in Spanish score. Thus, a correlation could only be conducted between the HLS questions and Academic Achievement in English. A summary of the results is presented in Table 16 below.

Table 16.

Pearson Correlation Matrix among HLS Questions and Academic Outcomes.

	Academic Achievement English
HLSQ1	0.03
HLSQ2	-0.16
HLSQ3	-0.11
HLSQ4	-0.07

* $p < .05$

** $p < .01$

It was found that there is no significant relationship between any of the HLS questions and academic achievement in English.

APPENDIX C

BILINGUAL PARENT INTERVIEW

PARTICIPATING SCHOOL DISTRICT

BILINGUAL PARENT INTERVIEW

Student:_____ Birthdate:_____ Age:_____ Grade:_____

School of Residence:_____ School of Attendance:_____

Teacher:_____ Days:_____ Hours:_____

Country of Origin:_____

Has the child continuously lived with his/her biological family?   YES   NO

Parent/Guardian:_____

Address: _____   Telephone:_____

_____

A.   SOCIAL AND FAMILY HISTORY

A.1.   Length of stay in U.S. mainland?   Father:_____   Mother:_____   Student:_____

A.2.   How many persons living in the household?_____

Full Names   Age   School   Relationship

_____
_____
_____
_____
_____
_____
_____
_____
_____

A.3.   Language(s) spoken to the student by: Father:_____   Mother:_____

Siblings:_____   Other:_____

Language(s) student responds with: Father:_____   Mother:_____

Siblings:_____   Other:_____

A.4.   Father's Occupation:_____   Education:_____

Mother's Occupation:_____   Education:_____

Parent's availability for calls or IEPs:_____

Parents' proficiency in English: Fluent (FES)   Limited (LES)   None (NES)

Father:_____ Mother:_____ Forms sent home in English or Spanish?_____

A.5.   Has any family member had any language and/or learning disability?   YES   NO

        If yes, please explain:_____

A.6.   Trip to country of origin (Indicate length of stay where applicable):_____   YES   NO

B.   PARENT/FAMILY OBSERVATIONS ABOUT THE STUDENT:

B.1.   Does your child have problems following directions?   YES   NO

B.2.   Does your child have problems understanding what you say?   YES   NO

B.3.   Would other family members understand what your child?   YES   NO

B.4.   Can your child tell a story in sequence with details?   YES   NO

B.5.   Does your child talk about future events?   YES   NO

B.6.   Does your child express events that might happen?   YES   NO

B.7.   Is your child told stories/family history, etc?   YES   NO

B.8.   Can you child accurately remember and discuss past events?   YES   NO

B.9.   Do you and your family read? Please specify:_____   YES   NO

B.10.   What are your child's interests?_____

B.11.   Does your child have behavior problems at home?   YES   NO

B.12.   Does your child have difficulties in making friends?   YES   NO

B.13.   Does your child have difficulty in learning new concepts?   YES   NO

C.   SCHOOL HISTORY

C.1.   Was your child in school in your home country?   YES   NO

C.2.   Were any concerns, problems observed?   YES   NO

        If yes, please explain:_____

C.3.   Grade(s) completed::_____

C.4.   Did your child attend pre-school (U.S. or home country)? Start:_____End:_____   YES   NO

C.5.   Have there been school attendance problems?   YES   NO

C.6.   Have you had to move frequently?   YES   NO

        If yes, please explain:_____

C.7.   What, if any, are your concerns, if any, regarding your child's abilities?
_____

D. HEALTH AND DEVELOPMENTAL INFORMATION

D.1. Vision Eval/Date/Result:_____

D.2. Hearing Eval/Date/Result:_____

D.3. Allergies: YES   NO

D.4. Illnesses: YES   NO

D.5. Hospitalizations: YES   NO

D.6. Accidents: YES   NO

D.7. Medications-past/present: YES   NO

D.8. Problems with pregnancy?   YES   NO

D.9.. Problems with delivery?   YES   NO

D.10. Birth Weight:_____

D.11. At what age was h/she weaned from bottle?_____

D.12. At what age did h/she begin to talk?_____

Single Words:_____Phrases:_____

D.13. At what age was h/she potty-trained?_____

D.14. At what age was h/she learn to walk?_____

D.15. At what age was h/she begin to eat meat?_____

D.16. How much TV does h/she watch?_

Please describe a typical day for your child (e.g. what does h/she do? Where and with whom does h/she spend most of his/her time?
_____

Anything else you think is important? _____

Comments:
_____

This interview was completed by:_____   Date: _____

Interview Conducted in: English   Spanish

HOME LANGUAGE SURVEY

In what language do you prefer to receive phone calls?
- o English
- o Spanish

1. **Language Code (2) :**
   Which language did your child learn when he or she first began to talk?   _____/_____
   Code   Description

2. **Language Code (3):**
   What language does your child most frequently use at home?
   _____/_____
   Code   Description

3. **Language Code (4):**
   What language do you use most frequently to speak to your child?
   _____/_____
   Code   Description

4. **Language Code (5):**
   Name the language most often spoken by the adults at home.
   _____/_____
   Code   Description

HOME LANGUAGE CODES					
State Code	Description	State Code	Description	State Code	Description
11	Arabic	43	Gujarati	41	Polish
56	Albanian	21	Hebrew	06	Portuguese
37	American Sign Language (ASL)	22	Hindi	28	Punjabi
12	Armenian	23	Hmong	45	Romanian
42	Assyrian	24	Hungarian	29	Russian
61	Bengali	25	Ilocano	30	Samoan
58	Bosnian	26	Indonesian	31	Serbian
13	Burmese	27	Italian	60	Somali
03	Cantonese	08	Japanese	01	Spanish
36	Cebuano (Visayan)	09	Khmer (Cambodian)	46	Taiwanese
54	Chaldean	50	Khmu	32	Thai
20	Chamorro (Guamanian)	04	Korean	57	Tigrinya
39	Chaozhou (Chaochow)	51	Kurdish (Kurdi, Kurmanji)	53	Toishanese
14	Croatian	47	Lahu	34	Tongan
15	Dutch	10	Lao	33	Turkish
00	English	07	Mandarin (Putonghua)	38	Ukranian
16	Farsi (Persian)	48	Marshallese	35	Urdu
05	Filipino (Pilipino or Tagalog)	44	Mien (Yao)	02	Vietnamese
17	French	49	Mixteco	99	All Other Non-English Languages

PARENT PASSIVE CONSENT FORM (ENGLISH)

(Date)

(ParentName)

Dear ParentName,

This letter is to inform you of a research study that is going on at your child's school looking at the language abilities and academic achievement of non-native English speaking children who are in 2nd through 5th grade. Your child was chosen to take part in this study because he/she is or was a student in one of those grades and their records indicate that they have been screened for bilingual evaluation as part of an initial special education referral. As a part of the study, your child's school records would be reviewed. The purpose of this study is to look at factors that might help predict whether children who speak English as a second language will do better on standardized test scores in elementary school. With this study, we hope to be able to identify children earlier who might need extra help overcoming language barriers before they have academic problems in school.

Please know that your child's records are strictly confidential between the research study team and your child's school. This study is being conducted by a professor and a graduate student at Temple University as part of the graduate student's dissertation and will not be shared with any government agency. Every attempt will be made to keep all information about you and your child confidential, and when keeping records of information, yours' and your child's name will not be used. All participants will be identified using a unique code number instead of their name.

Your child is not expected to receive any direct benefits from your participation in the study. However, the information developed in this study may help us to better understand the impact of children's bilingualism on their test scores, and how we may better help bilingual children to get more support before they have academic problems.

We will be visiting your child's school again in a couple of days to schedule times to conduct record reviews. You have already completed all the records that we would like to review. These include: the Home Language Survey, the Bilingual Parent Interview, your child's scores on the California English Language Development Test (CELDT), the Language Assessment Scales (LAS) Links Español, the Woodcock Johnson Tests of Achievement (WJ-ACH), the Woodcock Muñoz Language Survey, as well as the California state-wide achievement tests. In addition, demographic information about your child or family may be reviewed as part of your child's school records (for example: what type of classroom is your child in? Does your child receive free or reduced-lunch at school?). Because we are only

conducting record reviews, your child's participation in normal classroom or playground activities will not be disrupted.

Any information that is gathered in connection with this study and that can be identified with your child will remain confidential and will be disclosed only with your permission or as required by law. Unless you specifically withdraw your consent, you are agreeing to the release of your child's record to your child's school.

Records and data created by the study may be reviewed by Temple University's Institutional Review Board and the Office for Human Subjects Protections (OHRP) to assure proper conduct of the study and compliance with federal regulations. Results of this study may be published. If any data is published, neither you, nor your child will be identified by name.

If you have any questions about your child's <u>rights as a research subject</u>, you may contact the Institutional Review Board Coordinator, Richard Throm at (215) 707-8757.

If you have any questions about <u>research-related concerns</u>, or you wish to <u>withdraw your consent</u> to release your child's records, you may contact Erin Rotheram-Fuller, at 215-204-5745, or erf@temple.edu, or Laura Katz, at 858-901-9734, or laurakatz12@gmail.com.

Sincerely,

Erin Rotheram-Fuller, Ph.D., Assistant Professor   Laura Katz, M.Ed, Doctoral Student

Temple University, College of Education

APPENDIX F

PARENT PASSIVE CONSENT FORM (SPANISH VERSION)

(Fecha)

(Nombre de Padre)

Querida Padre,

Esta carta es para informarle a una investigación en la escuela de su hijo que analiza las habilidades lingüísticas y logros académicos de niños cuya lengua maternal no es el inglés del segundo al quinto grados en la escuela primaria. Su hijo fue escogido como candidato posible en este estudio porque **está o esataba** en uno de estos grados y sus archivos indican que ha sido sometido a una evaluación bilingüe como parte de un remito inicial de educación especial. Como parte de la investigación, revisaremos los expedientes de su hijo.   El propósito de este estudio es examinar cuáles factores puedan pronosticar si los niños cuya segunda lengua es el inglés tendrán mejores resultados en los exámenes estandarizados en la escuela primaria. Con esta investigación, esperamos poder la habilidad para identificar los niños que necesiten más ayuda en superar los obstáculos lingüísticos antes de que tengan problemas en la escuela.

Por favor, sepa que sus respuestas son **estrictamente confidenciales** entre el equipo de investigadores y la escuela de su hijo. Este estudio está conducido por una profesora y una estudiante graduada de la Universidad de Temple como parte de la disertación de la estudiante graduada y **no será compartido** con ninguna agencia gubernamental. Todo intento será hecho para mantener confidencial toda la información sobre Ud. y su hijo, o información dada por su hijo, y en los archivos de la información no se va a usar el nombre de Ud. o de su hijo. Todos los participantes, incluyendo Ud. y su hijo, serán identificados por un código numeral único.

También estaremos visitando la escuela de su hijo en unos días para planificar un horario de citas para revisar los expedientes. Ud. ya ha completado todos los archivos que queremos revisar. Estos incluyen: El Estudio sobre la Lengua Materna, La Entrevista Bilingüe con los Padres, los resultados de su hijo en el Examen de Desarrollo de la Lengua Inglesa de California (CELDT), la Evaluación de Scales Links Español, la Investigación de Lenguaje de Woodcock Muñoz (WMLS), las Pruebas de Aprovechamiento de Woodcock Jonson, (WJ-ACH), y las mediciones de éxito estatales de California. Además, la información demográfica sobre su familia podría ser revisada como parte de los archivos escolares de su hijo (por ejemplo: ¿en qué tipo de aula está su hijo?) Dado que solamente estamos llevando a cabo revisiones de los archivos de su hijo, no será interrumpida la participación de éste en actividades normales dentro y fuera del aula.

No se supone que su hijo reciba un beneficio directo por su participación en el estudio. La información adquirida en este estudio podría ayudarnos a mejor comprender el impacto del bilingüismo en los niños y las competencias cognitivas y académicas del lenguaje, o en el idioma nativo del niño y en su segundo idioma y como podemos ayudar a los niños bilingües con mas ayuda antes de que tendran problemas académicos.

Toda información juntada en conexión con este estudio y que puede ser identificada con su hijo quedará confidencial y sólo será revelada con su permisión o según los requerimientos legales. Si Ud. no va a sacar a su consentimiento específicamente, Ud. está de acuerdo de divulgar los expedientes de su hijo a la escuela de su hijo.

Los archivos y los datos generados por este estudio podrían ser revisados por la Junta Directiva Institucional de la Universidad de Temple y la Oficina de la Protección de Sujetos Humanos para asegurar los conductos apropiados del estudio y la conformidad con las regulaciones federales. Los resultados de este estudio podrían ser publicados. Si cualquier dato está publicado, ni Ud. ni su hijo serán identificados por nombre.

Si tiene cualquier pregunta sobre <u>los derechos del sujeto estudiado</u> de su hijo, puede contactar al Coordinador de la Junta Directiva Institucional, Richard Throm al (215) 707-8757.

Si tiene cualquier pregunta sobre <u>preocupaciones relacionadas al estudio</u>, o si quiere <u>retirar su consentimiento</u>, puede contactar a Erin Rotheram-Fuller, al 215-204-5745 o a Laura Katz, al (858) 901-9734.

Sinceramente,

Erin Rotheram-Fuller, Ph.D., Profesora Auxiliar   Laura Katz, Maestría en Educación,

Temple University, Escuela de Educación   *Estudiante Doctoral*

APPENDIX G

SCORING CRITERIA FOR STUDY VARIABLES

Scoring Criteria for Study Variables.

VARIABLE	TYPE	DESCRIPTION
HOME LANGUAGE SURVEY (HLS)		
ESL Service Recipient	Categorical	Spanish=1, All others=0
HLSQ1	Categorical	First language learned by child?
		Spanish=1, Other= 0
HLSQ2	Categorical	Language used most frequently by child at home?
		Spanish=1, Other= 0
HLSQ3	Categorical	Language used most frequently to speak to child?
		Spanish=1, Other= 0
HLSQ4	Categorical	Language spoken most often by adults at home?
		Spanish=1, Other= 0
SCHOOL RECORDS		
Free or Reduced Lunch	Categorical	Student qualifies for free and reduced lunch? Yes=0, No=1.
Special Education Placement	Categorical	Current IEP? Yes=1, no=0
History of ESL Services	Categorical	Record of previous or current ESL services? Yes=1, No=0
Hispanic	Categorical	Hispanic? Yes=1, No=0.
BILINGUAL PARENT INTERVIEW (BPI)		
Parental Educational Level	Continuous	Highest grade completed.
Parental Occupation	Categorical	1=unskilled labor, housewife, 2=skilled labor, 3=white-collar, technical work, 4=managerial, professional
Time spent in the U.S.	Continuous	# years in U.S. mainland.
Immigration Status	Categorical	US Native = 0, Immigrant =1
School attendance problems	Categorical	School attendance problems? Yes=1, No=0.

Scoring Criteria for Study Variables, Continued.

Frequent Moves	Categorical	Have you had to move frequently? Yes=1, no=0
Immigration Gaps	Categorical	Trip to country of origin? Yes=1, no=0.
Family Intactness	Categorical	Child continuously lived with biological family? Yes=, no=
Prior educational experience in home country	Categorical	Student in school in home country? Yes=1, No=0.
Preschool experience	Categorical	Student attend preschool? Yes=1, No=0.
Family history of learning difficulties	Categorical	Family language/learning difficulty? Yes=1, No=0.
Student History of learning difficulties	Categorical	Student language/learning difficulty? Yes=1, No=0.
Declared English competence	Categorical	Parents (father/mother) proficiency in English? 1=Fluent-FES, 2= Limited-LES, 3= Non-NES
Parents' oral language preferences at home	Categorical	Language(s) spoken to student by (Father/Mother/Siblings/Other). English to all = 1, English and Spanish = 2, Spanish to all = 3
Parents' oral language preferences at school	Categorical	Interview conducted in: English=, Spanish=
Student Language preferences	Categorical	Language(s) student responds with (Father/Mother/Siblings/Other). English to all = 1, English and Spanish = 2, Spanish to all = 3
Family Reading	Categorical	Do you and your family read? Yes= 1, No=0
Family Story-Telling	Categorical	Is your child told stories/family history, etc? Yes=1, No=0.
Student's Age	Continuous	Student's Age
Grade in school	Categorical	Grade in school
Number of household members	Continuous	# of persons living in household
Gender	Categorical	Female=1, Male=2
LANGUAGE PROFICIENCY		
English Language	Ordinal	Student's CELDT scores: Beginning=1, Early Intermediate=2, Intermediate=3, Early Advanced=4, Advanced=5
Spanish Language	Ordinal	Student's pre-LAS or LAS Espanol scores:

Scoring Criteria for Study Variables, Continued.

ACADEMIC ACHIEVEMENT		
English-language arts	Ordinal	English-language arts scores will be determined by the students' performance on the STAR program in the CST, the CMA and the CAPA. Far below basic=1, below basic=2, basic=3, proficient=4, and advanced=5.
Spanish-language reading-language arts	Ordinal	Spanish-language reading-language arts scores will be determined by the students' performance on the STAR program in the STS format. Far below basic=1, below basic=2, basic=3, proficient=4, and advanced=5.